

CHRYSANTHEMUM MANUAL

Fred C. Gloeckner + Co.s. Inc. New York 10, N.Y.



TERMS

The base price for each variety is listed with the variety. What you actually pay for each Mum cutting depends upon the amount of "earned credit discount" that you establish by:

- 1. The number of weeks your order is placed in advance of requested shipping date.
- 2. The number of cuttings you order for shipment within a 52 week period.
- 3. The promptness with which you pay the invoice for mums—within 28 days.

Discounts Effective January 4, 1960

Early Order—Prompt Payment Discount

The number of weeks an order is recorded in advance of shipping date.

| If Order Is Received | Discount Will Be |
|-------------------------------------|---------------------|
| Less than 4 weeks prior to shipping | 2% |
| 4-5 weeks prior to shipping | 5% |
| 6-9 weeks prior to shipping | 6% |
| 10-13 weeks prior to shipping | 7% |
| 14-17 weeks prior to shipping | 8% |
| 18-21 weeks prior to shipping | 9% |
| 22 weeks or more prior to shipping. | 12% |

THE EARLY ORDER—PROMPT PAYMENT DISCOUNT IS AVAILABLE WHEN INVOICE IS PAID WITHIN 28 DAYS.

Volume Discount

If you have ordered 10,000 or more cuttings during the 52 weeks prior to placing your order, the following firm discounts apply.

| 10,000 | 3% |
|---------|-----|
| 30,000 | 5% |
| | 6% |
| 100,000 | 7% |
| 150,000 | 10% |
| 210,000 | |

Inquire about the discount schedule above these amounts.

TERMS OF SALE

Fifty rooted cuttings of each variety is the minimum that can be supplied. More than 50 of a variety must be in multiples of 50.

Any changes or cancellation of chrysanthemum orders must be received at least 30 days before shipping date. Every effort is being made to deliver stock which is free from pests, but purchases must be made with the understanding that we assume no responsibility for losses which may result from same.

To facilitate deliveries, cuttings will be shipped on Monday and Tuesday of each week. However, we will gladly make shipment on Friday or Saturday, if specifically requested and provided the order is received one month prior to the requested shipping date.

WARRANTY AND LIMITATION OF LIABILITY: Subject to the limitations of liability herein set forth, we warrant that the seeds, plants or bulbs sold are as described on the container, within recognized tolerances. Our liability on this warranty is limited in amount to the purchase price of the seeds, plants or bulbs. In no event shall we be liable for the crop, or for any loss due to the failure, impairment or quality thereof or varietal variance therein, whether such loss results from breach of the foregoing warranty, from breach of any other provision of the buyer's contract for purchases of said seeds, plants or bulbs, or from any other cause.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE



15 EAST 26th STREET NEW YORK 10, NEW YORK

Telephone: ORegon 9-6460-6461 Cable Address: GLOECKNERS, N. Y.

CULTURE

YEAR-ROUND FLOWERING SCHEDULE

BETTER CHRYSANTHEMUM CUTTINGS

WHAT YOU ARE BUYING

There are important "intangibles" in the chrysanthemum cuttings we are offering that you should consider carefully.

- 1) All our cuttings have been produced from cultured mother blocks.
- 2) Selection has been carefully made of the best clones in each variety.
- 3) Every effort has been made to assure trueness to name of every cutting shipped.
- 4) Cuttings are selected for uniformity of size.

- 5) Rooting is done under the most sterile conditions practical and the cuttings are shipped at the right state of root development.
- 6) The cuttings are expertly packed and routed to assure the best arrival condition.
- 7) Varieties have been tested and specific cultural pointers are available so that you can produce a good crop first time.
- 8) The exclusive YGA varieties reflect the efforts of an expensive breeding program, and these varieties are made available to you at prices comparable with the older sorts.

AN ADDED INCENTIVE

Speaking of the YGA varieties, while this is fundamentally a marketing control, still it presents an opportunity for you to participate and profit in the search for newer sports—as suitable financial rewards are made to first finders of anything different in the Yoder developments.

HANDLING CUTTINGS

All cuttings are packed in specially designed boxes that provide the best environment possible while in transit. All cuttings are rooted in a light medium designed to provide optimum aeration and moisture for the root system.

Cuttings are sufficiently rooted to plant directly into their final location. Some protection in the form of temporary shade or light syringing may be desirable for the first four to five days, but this should be discontinued as soon as plants are turgid and new root growth is observed. If at the end of 48 hours the plants are not turgid during the morning hours and new white growth is not visible then one of the following factors is restricting growth: Roots are not receiving sufficient oxygen, as a result of the soil being too tight or cuttings planted too deep; roots are injured from fertilizer salts in soil as evidenced by browning or blackening of root tips; root system is not receiving sufficient water as a result of soil not being thoroughly watered prior to and after planting.

Since rooting and shipping tend to deplete the nitrogen in the cutting it is beneficial to water in the cuttings with a starter solution. Growers using a Fert-O-Ject may use the same solution as they use on older, established plants.

At the end of one week's growth the root system of actively growing plants should easily create a soil ball 6" square when held in your hands.

DELIVERIES

With the advent of the time pinch and precision method culture, it is necessary to have cuttings arrive on a definite date. To assure proper delivery, advance notice should be given the propagator. We would appreciate it if you could let us know your requirements early enough so that our propagator can plan his growing of stock plants and cuttings even more systematically.

Most often the propagator will follow the customer's suggested method of transportation. However, we encourage you to contact the propagator's transportation department should delivery problems arise.

DELAYS

With the reduced delivery schedule of the Railway Express Agency, there may be delays in delivering shipments. Chrysanthemum cuttings can be injured from cold as well as being too long in transit. If the cuttings are slightly wilted, they should be immersed in water for a short period and then planted. If the cuttings have been slightly frozen, place them in a cool room and thaw them out gradually. It is also possible to place them in a pail of cool water for a short period before planting. Of course, if stock is badly frozen, or if long delays have occurred so that the cuttings are heated, yellowed or rotted, a claim should be filed at once with the carrier. Air Freight and truck shipments have speeded up deliveries.

If the customer desires to have the propagator handle his claim with the claim department or the carrier he should mail to the propagator an inspection report signed by the local claim agent and by himself.



SOILS

The time taken and money spent in the cost of proper soil preparation should be considered the same as taking out an insurance policy on the success of your crop. Year-round growing has progressed to a degree of precision that will not permit the grower to have production losses due to factors he can control.

Maintain an open, well-aerated soil that drains well in addition to having some moisture-retention capacity. Periodic additions of organic matter to greenhouse soils is necessary for maintaining these desired properties that are associated with good soil management.

In order to achieve uniformity in soil it is necessary to add uniformly responding material. Of the various sources of organic material available German peat has been the most reliable form of soil additive. This is the result of the availability of a uniform grade, the slow rate of breakdown and the high degree of moisture retention it promotes in the soil. Other forms of organic matter can be used just as successfully but usually they require more study and effort to achieve the same results.

Caution should be exercised in the use of peat in soils that are naturally high in moisture retention. In cases where natural high soil moisture results in improper aeration, an inorganic additive such as perlite will be more effective in improving soil aggregation.

Greater care in soil preparation permits rapid penetration of water and air and a uniform supply of fertilizer. If water remains on the surface of your soil for more than a few moments after watering, the soil is not of good, open structure.

During the winter period, chrysanthemum plants are much more sensitive to overwatering and high soluble salts than during spring, summer and fall. When sterilization is arranged to just precede the planting for the winter crops, the results are best.

CHEMICAL STERILIZATION

Where steam is not available any of the following chemicals may be used to do a comparable job:

Methyl Bromide: Commonly called MC-2 is a combination of Methyl Bromide with 2% chloropicrin (tear gas) to act as a warning agent. It will give good control of nematodes, weed seeds and

certain fungi. Methyl bromide is not an effective control for verticillium wilt.

Larvacide-chloropicrin: Commonly called tear gas, it is effective on fungi, nematodes, weed seeds and soil insects, and will control verticillium wilt. Apply with a special applicator by plunging approximately $1\frac{1}{2}$ to 3 cc. per square foot of area.

Vapam: A relatively new material that has been effective in the control of nematodes, soil fungi and weeds. Higher rates will give complete control while lower rates will control weeds.

Mylone: A new material that is applied in a pellet or liquid form and does not require rototilling. This material shows promise on outdoor crops.

Various combinations of the above materials are available such as **DOWFUME**, **PICFUME**, etc. All of these materials are toxic to man and growing plants, therefore, caution in their use is necessary. After applying these materials the soil must be covered for best results and a period of aeration prior to planting is a must to prevent injury or death of plants. Low soil temperature and excessive soil moisture frequently limit the use of these materials.

The actual job of steam sterilization is relatively simple, but it is the small steps leading up to the job done that can complicate matters.

Two weeks prior to removing the old crop start to leach the bench. All soluble salts can generally be removed with two or three good heavy waterings. It is much easier to do this when the old crop is still in the bench as it pulls the moisture from the soil. If excess soluble salts are not leached before steaming, serious trouble can result because steaming often releases chemicals that were not available prior to steaming.

The bench should be properly rototilled and the desired amount of organic matter added along with the necessary fertilizers **before** steam sterilization. Amounts of the various chemicals to add are:

(1) Treble Superphosphate

5 lbs. per 100 sq. ft.

(2) Calcium Carbonate (Ground Limestone) or Gypsum 10 lbs. per 100 sq. ft.10 lbs. per 100 sq. ft.

Addition of above fertilizers is not always necessary nor desirable on soils that have been repeatedly fertilized and cropped. The bench should **not** be reworked after steaming because of the possibility of recontaminating the sterile soil.



STEAM STERILIZATION

The soil moisture level just prior to steaming is very important and is a point that is very sadly abused. Dry soil will not conduct heat efficiently and wet soil tends to condense excessive moisture. The soil should be in the same condition that is considered desirable in which to plant. This is called "friable" and means that after forming a soil ball in the hand that it can be crumbled with two fingers.

Moisture content of soil is important because of these reasons:

- (1) Heat combined with moisture does a better job of kiling micro-organisms and weed seeds.
- (2) It takes less time to heat a moist bench than it does a dry bench. This is also the case with an exceedingly wet bed, where soggy benches almost take twice the time.

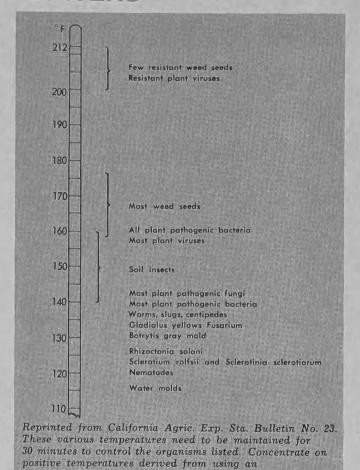
Large clods of soil should be broken so that the heat can penetrate to all areas uniformly.

Steam can be efficiently distributed to all sections of the bench simultaneously by the use of aluminum tubing 3" in diameter (with holes drilled in). Canvas hose with eyelets also works well. With both materials, two runs are recommended per 4-foot bench.

The soil should be held at the coolest spot to 180 degrees F. for 30 minutes, or when it first hits 200 degrees F. Be sure to use an accurate soil thermometer every time and do not guess. The steam cover should be removed as soon as the desired temperature is reached so that the excess steam can escape into the atmosphere without condensing in the soil. As soon as the soil is cool enough to handle, it is time to start planting—THE VERY BEST TIME.

Steam, in forcing its way down through the soil, creates millions of tiny pores which will remain for the life of the crop if undisturbed. It is therefore strongly recommended that soil not be rototilled or worked over again prior to planting.

When steam sterilizing, some growers use a plastic cover (not polyethylene) about 16 feet wide so that it can be extended to cover the aisles. This surface-steams the benches and bench supports. Instead of injecting steam into the end of the bench where there is danger of not reaching required temperature at the point of injection, it is suggested that the steam pipe be entered on the side about 8 to 10 feet from the end of the bench. A "T" is used whereby a \(^3\)4-inch pipe directs the steam to the short end and the long end is equipped with a 2-inch pipe. By this means there is even distribution.



FERTILIZERS

Application

accurate thermometer.

Chrysanthemums do much better right from the start if the soil is not too rich. Very often this crop will start off faster in new soil as compared to old soil that has been sterilized, just because of the lower nutrient level in new soil. When using new soil, apply 5 pounds of superphosphate per 100 square feet of area, plus a liberal application of organic matter before planting. Phosphorus moves slowly within the soil mixture. It should always be added before the crop is benched so that it may be mixed thoroughly into the soil. Liquid feeding with watersoluble fertilizers is fast becoming the popular method of applying fertilizer.

Water soluble fertilizers are available in many different analyses and therefore you can apply the fertilizer your soil requires. Many growers are feeding soluble fertilizers through their automatic watering systems. Remember to apply weaker solutions of fertilizer more frequently rather than heavy doses less frequently. When using complete fertilizers in dry form we usually figure on using two applications at 2 pounds per 100 square feet of area, starting shortly after the plants have started to grow and ending when the buds are visible. Remember that the plant is the best guide to fertilizer requirements and that more mums are ruined by overfeeding than by nutrient deficiencies.



FEEDING

Nutrient deficiencies in the greenhouse rarely occur as rapidly or as severely as those described in experiments. For this reason soil tests should be made as early as possible upon expression or even slight symptoms.

Levels of Nutrition

When using sterilized soil, the best recommendations to follow would be to analyze your soil frequently. We have found that when the following Spurway nutrient levels are kept, good crops are the result. Nitrate nitrogen should be 10-25 p.p.m.; phosphorous 5-10 p.p.m.; potassium 20-40 p.p.m. and calcium 200 to 250 p.p.m. To increase the nitrate level, feed one pound of ammonium sulfate per 100 square feet of area, and to bring up the potassium, apply muriate of potash not to exceed 1 pound per 100 square feet. If phosphorous is needed, apply monocalcium phosphate at the rate of 1 pound per 100 square feet.

Soil fertility levels should not vary too much from the above and where frequent liquid fertilizer applications, such as with a Fert-O-Ject are used, they will not. However, where dry fertilizers are used it is essential that timing of applications be made when they are most effective. There are three important periods in the normal growth cycle that require optimum levels of nutrition, and, to insure this, dry fertilizer application are timed accordingly:

- (A) Prior to pinching to insure sufficient nutrients to the new shoots arising from the pinch.
- (B) Prior to the beginning of lights-out period or black cloth application, to insure sufficient nutrients for bud initiation and development
- (C) Prior to the expression of color or shortly after the bud is plainly visible, to insure sufficient nutrients for color development in the flower.

It should also be remembered that flowers from deficient plants at the time of cutting do not ship well and have poor keeping quality.

In the cooler weather and shorter days of September, omit the nitrogen if the plants are growing freely. The mum assimilates more phosphorous and pottasium during the time of bud initiation.

Soluble Salts

Soluble salts are chemical compounds consisting of an acid part (ion) and a basic part (ion). For example, common table salt, sodium chloride, consists of one ion of chloride and one of sodium. Chloride is an acid-forming ion, and sodium a basic or alkali-forming ion. The two

combine in chemically equivalent quantities to form a neutral salt. Other common acidic ions are sulfate, nitrate, bicarbonate and phosphate. Other common basic ions are calcium, magnesium, potassium and ammonium. Any basic ion may combine with any acidic ion giving rise to a great variety of salts.

All plant nutrients which are absorbed by plants from the soil or from culture solutions are absorbed in the form of salts or their constituent ions. All organic materials become "mineralized" through decay processes, and the nutrients in them are converted into salts before being absorbed by plants. Some salts contain plant nutrients and are beneficial in the small quantities required for plant growth. Others contain no nutrients. All salts are harmful beyond the small quantity required for plant growth. A little is bad, more is worse, up to the point where plants will be killed. Salts are found in most water and are applied as fertilizer. Improper watering may permit a concentration into the harmful range. Instruments called Wheatstone's bridges (Solubridge) are available which measure total soluble salts in terms of electrical conductivity or conductance. Many laboratories of the Agricultural Extension Service are equipped with Solubridge instruments for use in assisting with soluble salt problems.

It has been found that when planting rooted cuttings, the Solubridge readings should not be higher than 40, while established plants do not withstand readings of 100 without showing some harmful effects. To remedy excess soluble salts, apply 2 to 3 gallons of water per square foot and leach out this high salt content.

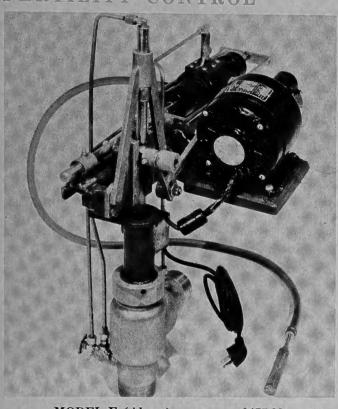


GATES WATERING SYSTEM

Gloeckner

CULTURAL POINTERS

FERTILITY CONTROL



MODEL E (Above)\$475.00

- CAPACITY
 - Standard Sleeve 5 to 120 g.p.m. (Ratio 200:1) Low Flow Sleeve 2 to 60 g.p.m. (Ratio 100.1)
- Can be installed in water mains from 11/4 inch to 4 inch
- Permanent type installation-electric motor driven
- Fully automatic
- Recommended for ranges over 15,000 square feet.

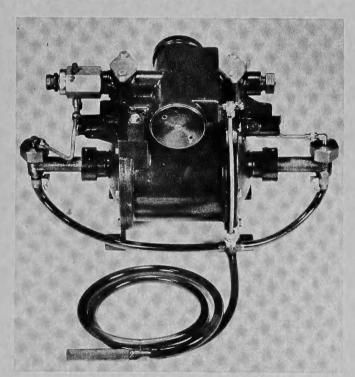
Injection of small quantities of balanced fertilizer into existing water lines is now the most efficient way to produce top quality. This can be done most economically with FERT-O-JECT. Chrysanthemums, both pot plants and cut flowers, respond equally as well under this system. The theory behind this recommendation is that plants require fertilizer in direct proportion to the amount of water they consume. The more rapidly a plant is growing the greater the amount of water it receives and consequently the more fertilizer is applied. It is possible to feed diversified crops with the same fertilizer.

Kinds and rates of fertilizer used will vary with the region and type of soil, but the following can be used as a general guide where constant fertilization is practised.

| KIND OF FERTILIZER | Rate—Pounds Per 50 Gallons (200:1) |
|---------------------------------------|---------------------------------------|
| Peters 25-10-10 | 35 to 50 lbs. |
| Peters 20-20-20 | 50 lbs. |
| Peters 20-5-30 | 50 lbs. |
| Ammonium nitrate Muriate of Potash | (25 to 35 lbs.) (15 lbs. |

The advantages of fertilizing with a FERT-O-JECT are:

- 1. Eliminates the labor spent on hand fertilization.
- 2. Maintains more uniform nutrient levels with no burning or starvation.
- 3. Automatically applies proper quantity of fertilizer.
- 4. Inexperienced help can apply fertilizer with no fear of burning plants because of dry soil.
- 5. Applies fertilizer the way plants use it . . . a little bit all the time.



| MODEL | U-400 | \$300 | .00 |
|-------|-------|-------|-----|

• CAPACITY

| OILI IIOII I | | |
|----------------|---------|-----------|
| Water pressure | 20 lbs | 12 g.p.m. |
| | 40 lbs | 17 g.p.m. |
| | 60 lbs | 21 g.p.m. |
| | 80 lbs | 24 g.p.m. |
| | 100 lbs | 28 g.p.m. |
| | 140 lbs | |

- Ratio-1:100
- Portable, but can be installed permanently into water main
- Fully automatic and self-lubricating.



PLANTING

PLANTING DATE

The proper planting date will vary according to the period of the year you desire to flower and the time permitted for growth of the plant prior to pinch.

Cuttings may be planted and allowed to flower without pinching. This is often used to improve quality. It also permits more crops a year from the same growing area.

PLANTING ROOTED CUTTINGS

When shipped all cuttings are active enough in growth and sufficiently rooted to permit planting directly into permanent locations. This method is recognized as being the most practical since it eliminates the check in growth commonly associated with transplanting. Never plant cuttings any deeper than they were in the propagating medium.

Apply sufficient water to new plants to set soil firmly around the base of the roots and to establish proper water movement within the soil.

When Rhizoctonia is a problem, water the plants in, or within one day after planting with a solution of 1 to $1\frac{1}{2}$ pounds of Terrachlor (75% wettable powder) per 1000 square feet. Terrachlor will not eradicate Rhizoctonia but inhibits the ability of the organism to infect, therefore, it is important to treat plants as early as possible and questionable whether treatment after disease appearance is useful.

SINGLE STEM OR NO-PINCH METHOD

Cuttings are planted and allowed to grow without pinching. It is an essential practice if the maximum number of crops a year are to be realized. Where crops are planted from September 15 to February 1.

The no-pinch method produces a crop superior in uniformity of flowering and spray formation.

LIGHT INTENSITY

Newly planted cuttings should have some protection in the form of a temporary shade and several light syringings for the first five to seven days. It is questionable whether it is necessary to shade cuttings in air cooled greenhouses. After plants are established, a minimum amount of

shade should be used—never reduce natural sunlight over 36 percent for satisfactory growth. Further light reductions will necessitate an adjustment in spacing to produce a satisfactory crop. Research work has shown that chrysanthemum production is directly related to light intensity. In other words, the greater the light intensity, barring heat effects, the greater the production. This makes clean glass a must in the winter months.

For cloth houses, the amber Saran is superior to the green because of more light under the amber covering. Naturally the plants require more water when grown under higher light intensities.

Shade is recommended when flowers are about one-half open to prevent sun-burning. When growing standards, a good practice would be to stretch muslin directly above the open blooms. This not only prevents sunburning but also keeps the blooms free from dirt.

PLANTING DISTANCE FOR PINCHED CROPS

For good quality chrysanthemums, we prefer to plant 7 x 7 inches or 8 x 8 inches pinched once, and thin the shoots to 3 per plant. On vigorously growing varieties the outside rows will support one more stem than the center rows in the bed. Light intensity should be high at the base of the plant for quality blooms, and if planted too closely, we lose the factor which promotes quality.

PLANTING DISTANCE FOR NO-PINCH CROPS

| Pompons | 4 x 6 inches |
|--------------|------------------------|
| Standards | 5 x 6 inches |
| Fast Disbuds | 4 x 6 inches (Summer) |
| Fast Disbuds | .6 x 6 inches (Winter) |



"HI-LITE" SPACING
IS NEWEST PLANTING
TECHNIQUE

YEAR-ROUND FLOWERING SCHEDULE

PINCHING

Pinching in modern day chrysanthemum culture serves three functions:

- (1) To produce lateral stems which can be flowered thereby reducing plant cost and enhancing uniformity in the crop.
- (2) To determine the type of spray formation developed on pompons and singles.
- (3) To determine the type of bud formation (crown or terminal), subsequent development and fullness of the flower, and the amount of necking of flowering stem on standards. Many factors affect the formation and development of buds on a chrysanthemum plant, one of which is the length of time a stem has grown prior to budding.

Experiments and field observations have shown that plants pinched too early produce early crown buds and the laterals developing as a result of this crown are usually long and uneven in flowering response. When plants are pinched too long after planting the lateral stem length is very short and the flower heads tend to be crowded together making an undesirable spray formation.

The schedules outlined in this book are designed to produce a crown bud which is surrounded by short-branched laterals that are in proportion to the over-all stem lengths and will flower uniformly.

Regardless of the time period between plant and pinch, all pinches must be made into the soft growth. Soft growth is most easily defined as growth that has occurred since planting that can easily be broken with a light twist of the thumb and fore-finger. Failure to pinch soft can often



REMOVE TOP ½ INCH OF STEM WITH SHARP KNIFE



MAKE SURE ENTIRE STEM
IS CUT WHEN PINCHING SOFT

result in low shoot count and retarded development of shoots. The result is often an uneven crop with poor production. Pinching into hard wood often disturbs the root system of the plant because of the force required to cut the pinch from the plant. Improper pinching can easily reduce the production potential.

PRUNING

If all the shoots that arise from a properly pinched plant were permitted to flower there would be little uniformity within the flowering stems, and many of the stems would not have satisfactory substance or strength to be of marketable value. In order to gain consistency in stems on pompons no more than 3 stems per plant should be permitted to develop on the inside rows of the bed and four stems per plant on the outside rows. If fewer stems per plant are desired the spacing may be decreased slightly but an average of 17 to 20 square inches per stem has been found most satisfactory.

Standards are usually grown two stems per plant with three on the outside rows. The most common error in pruning is waiting too long after pinching before selecting the correct number of stems. A decided check in growth results from delaying the pruning operation. Pruning late when shoots are hard and woody only serves to remove accumulated energy that could have been used to good advantage on the flowering stems. In addition, it usually leaves scar tissue which does not heal properly and may serve as a port of entry for disease organisms. The practice of stripping all leaves below the pinch level at the time of pruning is questionable. First, it removes potential food manufacturing organs, and secondly, it opens up avenues for disease entry.



DISSPRAYING AND DISBUDDING

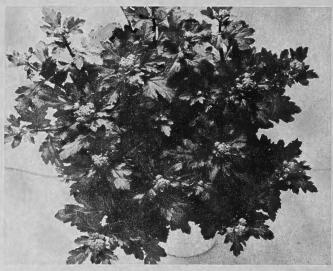
Disspraying: Vigorous growing, large-flowering varieties often produce side shoots below the main spray after bud set which should be removed to promote the best development and timing of the flowering shoot. These side shoots develop most heavily during the high light intensity periods of growing and in greater abundance on the outside rows of the bench. It has been found especially beneficial to remove these shoots on crops which are flowered under black cloth.

Removal of the center bud of the spray on many varieties of pompons will often assist in developing a more open spray. It also improves the keeping quality of the spray since the terminal flower is always older. In the Dot, Snowdrift and Pinocchio flower forms, maximum production will be attained only if all flowers are permitted to mature. Early removal of this center bud for maximum results is as important. Certain varieties during good growing conditions will initiate more buds than can develop into acceptable flowers. Removing part of the buds will improve the spray, timing, and increase the flower size on the remaining buds. On most varieties thinning to 4 or 5 buds per spray will produce higher quality flowers.

Disbudding: Varieties grown as standards or disbuds are grown so as to leave only one bud per stem. This is called "taking the bud." If you are growing according to the plant and pinch schedule given in the manual you will be able to take the first bud that appears. This is called a terminal bud.

TYPE OF BUDS

Terminal Buds: Terminal buds can be identified by the following traits: (1) A small, hard, central bud surrounded by a tight cluster of smaller buds all appearing similar and on a plane slightly



READY FOR DISBUDDING

below the center bud. (2) Normal-shaped leaf development up to the point of budding. (3) Terminal buds appear only after continuous short-day treatment as indicated by either shading or termination of lighting period.

Crown Buds: Crown buds are characterized by the following: (1) A somewhat softer and usually larger bud, surrounded by vegetative shoots having only leaf buds. Vegetative shoots are on a plane above the central bud. (2) Leaf shape may appear abnormal next to the central bud, being usually narrower and somewhat strapshaped. (3) Crown may appear on plants at any time but will occur most often on natural flowering crops from October to December.

The fact that crown-budding can occur at any time is an important clue to its origin and the condition responsible for its occurrence. It requires fewer number of days of correct day length to set the bud than it does to develop the same bud, therefore a crown bud only appears when the period was correct for setting the bud, but the environment was not correct for developing the bud.

Some actual cases where this might occur are: (1) Black clothing is not done consistently; too many nights skipped or poor-quality black cloth permitting too much light to fall on plants. (2) Lighting interruption caused by clock failure, or light leaking from an outside source interrupting the dark period. (3) Artificial light intensity inadequate outside or slightly shaded rows not receiving proper light intensity. (4) Failure to follow schedule and the growth from the pinch prior to lights out or black cloth shading was over twenty-four inches in length. (This is more likely to occur during the more rapid growing seasons of the fall and spring.)

In natural flowering of standards the following rule will assist in determining what to do with crown bud formation.

VARIETIES THAT FLOWER Oct. 3 to Nov. 15 Nov. 5 to Nov. 30 Dec. 1 to Dec. 15 REMOVE CROWNS THAT APPEAR BEFORE Sept. 5 Sept. 26 Oct. 3

Make the selection as early as possible to prevent the dog-leg appearance of the stem that develops from late selection on hardened stems.

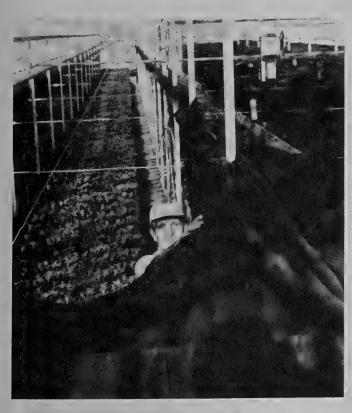


TERMINAL BUD SURROUNDED BY SIDE BUDS

Final selection or disbudding timing is an important practice often overlooked. Selecting the bud too early, may cause injury if not done carefully. The more common error is late disbudding. This can appreciably reduce flower size, color intensity and could delay flowering by as many as 4 or 5 days.

PREMATURE BUDDING

Bud initiation can occur anytime during the spring months—whenever temperatures in the greenhouses are consistently 60 degrees F. or above, and the days are short enough to initiate buds. These conditions can occur anytime from Sept. 1 to May 1 depending on the variety and the locality in which they are grown. Some varieties, such as the garden varieties and 8 and 9-week varieties, require very little short-day treatment, coupled with high temperatures, to initiate buds. This same tendency to set bud readily is what makes these varieties desirable for early shading and garden work. In order to prevent this premature setting of buds, these same varieties should be placed where they can be given additional light during the early spring months. Use 60-watt bulbs spaced 4 feet apart and 24 inches above the plants. Three hours of light during the middle of the dark period will prevent budding completely if the minimum intensity is 8 footcandles. The same treatment on either end of the night might not be so effective during cloudy periods which create a shorter day.

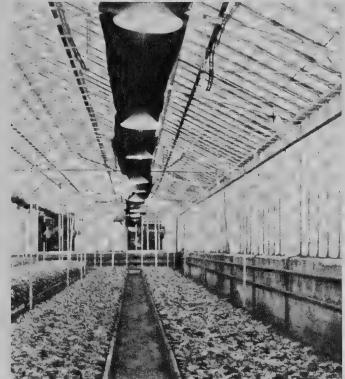


Shading an entire house in one operation.

FAILURE TO BUD—(BLINDNESS)

Temperature is associated with blindness. When plants are grown below 50 to 55 degrees F. during the bud initiation period many varieties will produce blind growth. In "Year-Round Flowering" we have found that chrysanthemums should be grown in a 60-degree temperature to insure good bud development. Although there are some varieties which require a higher temperature, and there are other varieties that will initiate buds at a lower temperature, it is safe to recommend a 60-degree temperature in most cases.

In the case of a short-duration low temperature emergency the question always arises as to when does most damage occur? Experience with cloth house operations has shown that the most critical time in regard to loss of production is in plants that have been under a lights-out condition for three to four weeks. At this stage of growth, failure to give adequate protection can make the difference between critical injury to the bud resulting in complete blindness and malformation of flowers. Stages of growth after this will be affected but not so often to the degree stated above. In conjunction with the above statement it should be noted that extreme fluctuations in night temperature above 65 degrees F. and below 54 degrees F. on winter crops after the bud is visible can cause serious delays and malformation of the bud. For best results, when finishing plants cool do not lower the temperature in more than 2-degree intervals over a 5 to 7-day period.



A two bed unit enables one person to handle black cloth. Lighted units can also be shaded in a flowering house.



SHADING—PETAL BURN

When blooming chrysanthemums during high temperatures and high light intensity, it is advisable to cover the beds with a cheese-cloth stretched about 18 inches above the top of the developing blooms. This covering will also help keep dirt off the open blooms. Sunburn sometimes is confused with flower ray blight, which is caused by Botrytis. Botrytis is more abundant during periods of high humidity and low temperatures.

Adequate moisture at the roots will help prevent petal burn during the hot summer days.

SUPPORTS

With higher labor costs, it has become necessary to eliminate some of the labor in supporting standards and disbuds. The old way of supporting with stakes or stringing each plant has given way to the welded box-wire or cross-string method of support. Turnbuckles placed near the ends of the beds will keep the wires much tighter. Most growers are only using one layer of wire and cross strings and are gradually raising it as the crop grows.

Pompons are usually supported by the string and wire method similar to that described above.

Production losses because of failure to support the plant sufficiently or soon enough are not uncommon. Growth that is not vertical is often thin, weak and produces small leaves as a result of the excessive shade it receives. This type of growth even when supported properly will not produce satisfactory flowers. In cloth-house culture it is very important to maintain the wire supports as close to the flower head as possible at all times to prevent breaking of the flower stem under the weight of moisture accumulation and wind pressure.

CUTTING FLOWERS

The outside rows of the bench will usually flower two or three days before the center rows. Flower stems are considered marketable when the most advanced flower is completely open but not reflexed on the outer edges, unless that is a variety characteristic. Pink and Bronze varieties

are often cut sooner during high temperature periods to retain maximum color. The lower onethird of the stem is stripped of Foliage to aid in bunching, packing and to prevent odors of decomposition from leaves when placed in water.

Place cut flowers in clean, room-temperature water as rapidly as possible after cutting. Wilted flowers may appear to take up water prior to packing, but frequently complaints of failure to absorb water upon receipt can be traced to the failure of tighter flowers to open uniformly, even though stems are in water. Standard varieties are ready to cut anytime after the tight center petal swirl disappears. Normally 5-7 days is a satisfactory time period for cutting out a particular variety. If more time is required it is desirable to review all cultural techniques.

SHIPPING FLOWERS

Packing of cut flowers should be carefully studied. The most common error is over-crowding in the shipping boxes.

It should be remembered that cut flowers will continue to grow and expand in size during transit, therefore, tightly packed boxes at departure time will be very tight upon arrival.

Quite often flowers from over-packed boxes have poorer keeping quality. This reduction results from bruised and crushed flower petals. Buyers complain that they cannot use the flowers without holding them in water for an extended period to regain turgidity in the crushed flowers.

Not securely fastening the blooms in the box will cause bruising of the petals. Cleating or sewing the stems to the box is essential. Cushion the blooms by placing enough padded paper at the bottom of the corrugated box and between the layers of blooms. In order to give complete protection pompon bunches should be wrapped so that the paper extends 1 or 2 inches above the flower heads. Chrysanthemum "Saf-Pak" is very helpful in shipping standards to market. One dozen blooms are held securely in one "Saf-Pak" holder.

Long-distance shipments carry better if the cut flowers are packed dry. Reduction of the temperature is accomplished by precooling the packed cut flowers. Never ship wet flowers.

YEAR-ROUND FLOWERING OF CHRYSANTHEMUMS

Basic research of Garner and Allard of the U.S.D.A. in 1920 established the fact that length of day affected the time of flowering and growth of plants. Practical application of this fact to year-round chrysanthemum culture was developed chiefly by Alex Laurie, Gus Poesch, Kenneth Post, and commercial plant propagators.

The basis for year-round or controlled flower-

ing of chrysanthemum rests on the fact that the chrysanthemum plant will develop flower buds only under a continuous dark period of more than $10\frac{1}{2}$ hours. Shorter periods do not prevent growth of the chrysanthemum plant. In year-round flowering the length of the days is adjusted either by artificial illumination or by the use of Black sateen cloth, to produce the particular growth response desired.

YEAR PRUING FLOWERING OF CHRYSANTHEMUMS

All varieties are classified according to their response; more particularly to the length of time required for flowering when exposed to the correct continuous dark period. This is called "Response Group." For example a 10 week response variety requires 10 weeks to flower after the correct continuous dark period has been started.

Varieties are sometimes listed under normal Flowering Date. This classification is based on the date the variety normally flowers in the 40-45 degree latitude. Flowering in this case is the result of the naturally occurring long nights as fall and winter approach, hence the term, "natural Flowering Date." It is simply a guide from which to calculate the flowering date in other latitudes.

Lighting

Artificial illumination is used to provide sufficient stem length during periods of the year when the natural darkness is long enough to start bud initiation. To prevent budding the dark period is then reduced to no more than 7 continuous hours by lighting the plants three to four hours each night, starting no earlier than 10:00 P.M. The light intensity must not be less than 7 foot candles when measured at plant tip on most varieties and no less than 9 foot candles when used on seven and eight week response varieties.

To achieve the above the following rules have been developed:

- (A) 1½ watts of light per square foot of growing area including walk space are required.
- (B) On single 42 to 48 inch benches use 60 watt lamps, with reflectors, spaced 4 ft. apart, 2-3 ft. above the tops of the plants.
- (C) For two adjacent benches 42 to 48 inches wide, use one line of 100 watt lamps with reflectors, spaced 6 feet apart and 2 to 3 feet above the tops of the plants.
- (D) For best response do not start lighting before 10:00 P.M.
- (E) Light for 3 hours during the months of August, September, October, March, April and May.
- (F) Light for four hours during the months of November, December, January and February.

The above is meant to be a guide and may be modified according to Latitude. Consult the local Sunrise and Sunset tables for the hours of continuous darkness and modify as needed.

Shading

During those periods of the year when the natural continuous dark period is not long enough for budding it is necessary to shade the plants, after sufficient stem length has occurred. To produce the desired dark period, a durable Black cloth (Sateen) which will reduce the light intensity to 2 foot candles or less, when applied at

5:00 P.M., is used for this purpose. The cloth should be applied at 5:00 P.M. and removed at 8:00 A.M. Shading when temperatures are 90 degrees or above have been found to delay flowering. Shading should be delayed until air temperature is below 85 degrees if possible, but shade must be applied for 12 continuous hours once it has begun. The cloth must be placed on the plants every night. (For every day skipped, an additional day's delay in flowering will occur.) The only addition to this rule is in cloth house production, where rain storms may prevent cloth application. Continue covering each evening on pompons until the latest buds show color and most of the flowers are well developed. For large flowering varieties, shading may be discontinued after all flower buds have attained the diameter of one half inch. Change position of folded cloth from day to day to prevent weak growth, due to the shadow falling on the same plants.

Excessive high temperatures prohibit the bud development, and during seasons of 90 degree afternoon temperatures, it is suggested that the black cloth be raised after twilight and lowered again in the morning before daylight. This cooler temperature hastens the development of the buds. Air conditioning greenhouses has made it possible to grow chrysanthemums in locations where natural high temperatures prohibited the development of this crop.

Temperature Control

For inter-connected units or crops at different stages of development the most efficient and effective temperature recommendations we can make are cool 60 degree crops. The house temperature is run at a straight 60 degree level night and day, cloudy or sunny. This is the lowest, safest minimum. It is the night temperature that counts. Eliminating fluctuation promotes steady, gradual growth. Keeping day temperatures down encourages more ventilation with corresponding reduction in relative humidity. This promotes stronger, heavier stems. On very bright days temperatures will frequently go higher but this should be due to radiant heat from the sun rather than convective greenhouse heat.

Selection and Varieties

The careful selection of varieties in year-round flowering is very important. An intimate knowledge of varieties will eliminate the pitfalls associated with this crop. Knowing how to select varieties on the basis of response groups is equally as important as selecting varieties that will respond out of season.

In latitudes where seasons, temperatures and light conditions are variable, it is to any grower's advantage that he grow only those varieties that will provide the highest yields and best quality for each period of the year.

YEAR-ROUND FLOWERING OF CHRYSANTHEMUME

The South is of course more fortunate in that light duration there and intensity fluctuates less than is experienced in the North, and even though only three or four response groups are used during a 52-week period, the need for meticulous varietal planning is just as important as

it is for any one period in the North.

Your Gloeckner representative is well equipped to furnish you the details and the proper varieties for each particular flowering date. His intimate knowledge will eliminate the guess work associated with mum programming.

INTERRUPTED LIGHTING FOR WINTER STANDARDS

When flowering December thru March crops of the standard varieties Indianapolis, Queen's and Mefo's the use of interrupted lighting has been tested and is recommended as a means of increasing petallage. This materially improves the appearance of the flower reducing the effect of decreased petallage and quilling known to be associated with abrupt shade during the short days of the winter period.

The essential requirements are:

- 1. Units planted to only the above mentioned varieties. The procedure has not been thoroughly tested on spray varieties or other standard varieties.
- 2. Accurate control of temperature. A 60° minimum night at all positions within the unit plus correspondingly higher day temperatures. Cloudy days were run at the 60° minimum. Bright days were between 65°-70°.
- 3. A rigid adherence to scheduled timing recommendations with interruption.
- 4. No extreme temperature reduction at or near the finish of the crop. Low temperature is known to be partly responsible for an increase of quilling in the Indianapolis varieties. A minimum of 55° is satisfactory only after buds show some color.
 - 5. The method recommended is as follows:

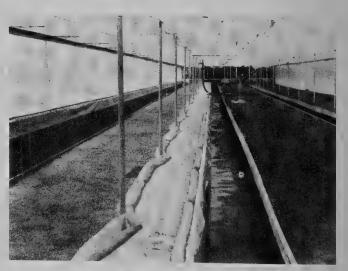
For any given crop to be flowered during the **December through March** period determine from the schedule the date lights are stopped. Count back twelve (12) days and on this date start and maintain nine (9) continuous short days of no lights. At the end of this nine (9) short day period run twelve (12) continuous days of lights on. Then turn lights out and maintain normal short days.

Thus the total number of long days as called for by the schedule remains the same. This second long day period immediately following the first short day period of nine (9) days serves to slow down the early bud development stage resulting in a petallage increase of approximately 50%.

To illustrate: For flowering Indianapolis White (10 week) for December 11 the schedule calls for October 3 lights out. Counting back twelve (12) days gives September 19. Therefore run short days from September 19 to and including September 28 (9 continuous short days). Starting September 29, run twelve (12) long days to and including October 10. On October 11 start the final and continuous short day period. This is the nine (9) short day—twelve (12) long day formula for interrupted lighting.



ALUMINUM FOR LIGHT REFLECTOR



CANVAS HOSE WITH STAND FOR HOLDING DOWN TARPAULIN

YEAR-ROUND FLOWERING SCHEDULE

INSECTS AND THEIR CONTROL

APHIDS, OR PLANT LICE

All aphids are true sucking insects that insert their beaks through the surface of the leaf or stem and extract the juices from within.

Injury. The feeding of aphids causes the plants to become sickly and stunted. The leaves curl inward, and when the flower terminal is infested, the blooms will be deformed. Certain varieties of chrysanthemums are more susceptible to attack than others.

Control. Nicofume Fumigation is an easy method of controlling the black aphid but will do very little to control the green or straw-colored aphids. Lindane or Parathion is much more effective on the very resistant green or straw-colored aphids. Vapotone is also effective when used at higher concentrations. Thiodan and Malathion will also control aphid and spider mite, with special attention being centered currently on Thiodan as probably the most effective aphid control.

CHRYSANTHEMUM LEAF MINER

The larva or maggot disfigures and weakens chrysanthemum plants by mining in the leaves. It may do considerable harm to the crop, but is easily held in check.

Injury. The young maggots burrow in the leaf tissue, leaving the upper and lower surfaces intact. The tunnels are irregular and winding. White blotches are thus formed, which later turn brown, and the leaves may die.

Control. As soon as it is noticed that any leaves are infested, they should be picked off. Parathion or TEPP aerosol bombs or sprays containing Lindane, Chlordane or Parathion, are very effective.

CHRYSANTHEMUM MIDGE

The chrysanthemum midge, although seldom seen today, can be one of the most serious pests

with which the grower has to deal. Under optimum conditions, a little over a month is required to complete the life cycle from the egg to the adult. The eggs are reddish-orange in color and are usually deposited on the tender tips of the growth. Under favorable conditions, the eggs hatch in about three days. The larva wanders about over the surface of the leaf for a day or two before finally penetrating into the leaf.

Injury. The midge attacks all parts of the plant but prefers the tender growth. If the infestation takes place when the plants are small, they fail to grow, although if the plants are well-developed when the infestation starts, the buds blight or are deformed, and the plant is rendered unsaleable.

Control. Lindane is effective against young and adults.

Parathion aerosols effective, but require frequent applications.

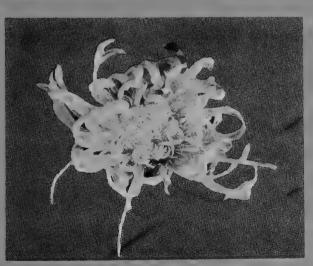
DDT effective against adults—repeated applications necessary.

CORN EAR WORM

The corn ear worm is a green to brown, nearly smooth caterpillar often mistaken for a cutworm when found within the buds or on the open flowers.

Injury. It is very destructive to the opening buds, for it feeds on their petals and other parts, deforming if not entirely ruining the flowers.

Control. If the attacked plants are blooming, spraying is out of the question, but thorough treatment with a 3 or 5% D.D.T. dust is recommended. After they have worked their way into the buds and are found to be feeding on the open flowers, hand-picking is the only remedy. Spraying the plants with Deenate 50W will control them before the color shows. Parathion fumigation will also keep them under control.



Corn Ear Worm Damage



Leaf Tyer



Mealy Bugs



INSECTS AND THEIR CONTROL

CUTWORMS

The larva is dull colored and from one to more than 2 inches in length. They are most active at night, and usually spend the day coiled up just under the surface of the soil at the base of the plant. They should not be confused with the corn ear worm, which cannot be controlled by poison baits.

Injury. Cut worms obtain their food by biting out sections of the leaf, stem or bud. Various species attack different parts of the plant. The one that is most damaging climbs to the top of the stem and eats into the flower buds.

Control. Those cutworms that feed on the foliage can best be controlled with Deenate 50W spray using 1½ pounds to 100 gallons of water. Parathion has been suggested as a good control measure and is more effective as a spray.

GREENHOUSE LEAF TYER

It gets its name from its habit of spinning light webs inclosing 2 or more leaves or tying together the parts of a single leaf. This caterpillar is very active, and when disturbed, will wriggle off the leaf, often backwards, lowering itself on a silklike strand.

Injury. When first hatched, the larvae eat out shallow holes on the under side of the leaf. As they grow, they enlarge these holes but usually do not cut through to the upper surface. The result is that the leaves become skeletonized.

Control. The best poison to control the larvae is Deenate 50W, either in the form of a dust or a spray. For liquid spray use 11/2 pounds of Deenate 50W to 100 gallons of water. Regular fumigations with Parathion will keep the leaf tyer under control. Malathion is also effective.

MEALY BUGS

Mealy bugs are small, sluggish, whitish, soft bodied insects, measuring up to one-quarter inch long, found in clusters on the undersides of the leaves or in the leaf axils.

This pest sucks the juices from the stems and leaves, discoloring and deforming the foliage.

Control. Parathion or Dithio are the most effective. Repeated applications necessary.

MITES

Cyclamen mite and broad mite are often found on the same plants at the same time. Broad mite could pass through a complete generation in 4 to 5 days at 70 to 80 degrees, while the cyclamen mite will take 4 to 5 times longer.

Injury. Infested leaves become deformed, curl from the outside inward, and wrinkle so that pockets and pit-like depressions are formed. When the infestation is severe, the mites collect about the buds causing them to blight. Oftentimes white varieties will show occasional red petals.

Control. Endrin at 1-400 with DuPont Spreader Sticker 1-2000 gave excellent control. Kelthane also is effective. Systox used as a soft drench has been found effective in mite control. Thiodan is effective.

RED SPIDERS

There are several species of red spiders that attack the chrysanthemum. They vary in color through yellow, orange and red. The body is oval in outline and bears 8 well-developed legs.

Injury. Red spiders pierce the epidermis of the leaf and draw the liquid contents from the cells, causing the leaf to turn pale around the injured portion. They prefer to collect on the under surfaces of the leaves, which they cover with silken threads.

Control. Aramite, Chlorobenzalite, Tedion, Kelthane, Parathion or Malathion spray or Aramite, Chlorobenzilate, Dithio, Parathion or Malathion bomb. P40 at 3 pounds per 100 sq. ft. after plants are well established; especially desirable for cloth house operators, will also control foliar nematodes. Plantfume 103 smoke generators and Fulex Parathion Fumigators are simple to use and very effective. Dithio is much safer than other insecticides when used on open flowers. Alternating the insecticides will very often give better control.



RED SPIDER INJURY



SYMPHYLID. ABOVE, ADULT-BELOW, EGGS AND YOUNG

INSECTE AND THEIR CONTROL

Symphylids are small white creatures about oneeighth to three-sixteenth inches long. About 40-60 days are necessary for the completion of the life cycle.

Symphylids destroy the fine root hairs and small rootlets, thus stunting the plants and often killing them outright.

Control. Complete control can be obtained with Lindane applied to the soil. Lindane can be applied to the surface of the soil either as a dust or as a wettable powder in a convenient amount of water. Application can be made when plants are in the bed, but best results are obtained if the insecticide is worked into the soil prior to planting. Use Lindane 25W at the rate of 8 ounces per 1000 ft. or 1% Lindane dust at the rate of 10 pounds per 1000 sq. ft.

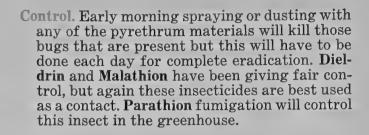
Injury. Sowbugs often become so plentiful in the greenhouse that they eat the newly-planted cuttings at the base.

Any of the many poison baits will give partial control but a complete spraying with Deenate 50W under the benches has given excellent control.

TARNISHED PLANT BUGS

The tarnished plant bug or sting fly comes into the greenhouse through open doors and ventilators in late summer or early fall and does considerable harm to this crop. Chrysanthemums growing in the open are frequently affected. Varieties such as Mary L. Hall and Sea Gull are attacked to a greater extent than other varieties.

Injury. It has sucking mouth parts and obtains its food by inserting its long, slender beak into the plant tissues and sucking up the contents of the injured cells, apparently injecting saliva, which causes the death of the tissue in the immediate vicinity. The stem is often slightly bent, and the terminal growth is malformed because of this injection.



TERMITES

Termites are not ants, though often called white ants. The food of termites is wood or cellulose. Soil inhabiting forms are the most common in the greenhouse.

Injury. Termites sometimes injure chrysanthemum plants by working up the center of the plant and hollowing out the stem. This injury will eventually kill the plant.

Control. Clean up all wood debris in soil. Replace old wooden benches. Keep wooden bench supports from direct contact with the ground.

THRIPS

The chrysanthemum is usually attacked by one or more species of thrips. These small, narrowbodied, active insects which range in color from yellow to brown or almost black, injure both the leaves and the blossoms.

Injury. Thrips have mouth parts that are fitted for piercing and scraping the leaf surface and for sucking the juices and other cell contents. The upper surface of the foliage is covered with whitish blotches, while minute black specks appear on the lower surface. Thrips are capable of causing severe injury within a short time.

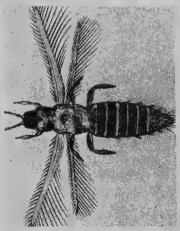
Control. Deenate 50W used at the rate of 1 pound to 100 gallons of water is a very effective control. Other insecticides containing Lindane are also recommended. Parathion will control the chrysanthemum and onion thrips. Regular dustings or spraying are necessary where infestation is heavy. Dieldrin is also very effective.



TARNISHED PLANT BUG



THRIP INJURY



ADULT ONION THRIP



DISEASES AND THEIR CONTROL

MILDEW

Symptoms. Whitish powdery growth on upper surface of leaves.

Control. Spray at regular weekly intervals with a good wettable Sulfur, 1½ pounds per 100 gallons of water to which a good commercial spreader has been added. Spray with Mildex 4 ounces per 100 gallons of water plus spreader whenever disease appears.

BACTERIAL WILT OR STEM ROT

Symptoms. Plants in all stages of growth may exhibit symptoms. In newly-planted cuttings it first appears as early wilting. Examination of cuttings will show the stems to be filled with a soft jelly-like, often red-colored mass. Stems may crack open in later stages and as the soft jelly dries it leaves the stems hollow. Breakdown of the infected plants may start at the location of a pinch and work down and out into breaks from pinch. Complete loss of the plants is not uncommon. In most cases, plants will wilt at some stage of the disease's progress causing the growth to be retarded, but it is possible for wilting to occur as late as flower opening.

Control. Remove and burn immediately all affected plants. Avoid pincing wet plants to prevent spread of the bacteria. Since it is a disease that attacks soft tissue during rapid growing periods of the year avoid excess use of ammonium fertilizers. Avoid dipping cuttings. Exercise care in variety selection for this period whenever possible.

BASAL STEM ROTS

Symptoms. One of the disease is accounting for a high loss of plants and production during the high humidity, high temperature periods of growing. One of two fungi are involved:

- (1) **RHIZOCTONIA:** May be distinguished by the following:
- (A) The decay originates near the soil surface rather than in the root system;
- (B) The diseased area has a brown coloration from the branches of the organism;
- (C) Strands of mycelium can be seen with a hand lens;
- (D) Where plants are crowded such as in a propagating bed or container the fungus can form a strong, brown-colored web over the plants, and
- (E) The expression of the disease is often rapid and may rot mature plants upward from an infection at soil line.

- (2) PYTHIUM: May be characterized by the following symptoms:
- (A) Rotting may start at the root tips;
- (B) Does not produce a characteristic color; roots will be brown and black depending on the various stages of decomposition. Rapid blackening of stem on actively growing plants is not uncommon;
- (C) May destroy the root system slowly causing a slow retardation in growth; and
- (D) In almost all cases the root system has stood in water for some time.
- (E) May be spread by pinching, causing death of plant from pinch, down to soil line.

Field observations often reveal both Pythium and Rhizoctonia attacking the plant at the same time. Spread of the organisms is through transfer of plants, tools and soils. Next to poor soil aeration and inadequate drainage, high salt concentrations are known to increase the severity of expression. The most severe symptoms of the disease are usually found on the beds having an uneven soil surface permitting surface water pockets. In ground beds of a cloth house the greatest incidence will be found in that part of the bed where surface runoff flooding was permitted. In both cases the excess of water seals the soil and provides conditions favorable for both diseases.

Physical Control. Supply better than just adequate drainage for all beds. Time taken in soil and bed preparation is money spent on insurance towards the success of your crop. In cloth houses slightly raised beds aid in preventing flooding and provide additional insurance for proper aeration where you have no control over soil moisture. Remember, these diseases can be transferred from diseased areas to new areas on any type of equipment or tools and by pinching.

Chemical Prevention. Broadcast TERRACHLOR (75% wettable powder) at 2 pounds per 1000 square feet before planting and mix thoroughly into the top 2 inches of soil. This may also be used as a soil drench prior to, or at any time of planting. Use TERRACHLOR at the rate of 2½ pounds per 300 gallons of water and apply to 1000 square feet of bed area. It should be recognized that this treatment is not a control for plants expressing symptoms but a preventative treatment.

YEAR-ROUND FLOWERING SCHEDULE

DISEASES AND THEIR CONTROL

FLOWER ROTS

(1) RAY BLIGHT

Symptoms. Caused by a fungus, Ascochyta chrysanthemi, which may attack any part of the chrysanthemum plant during its normal growing cycle, The name RAY BLIGHT is derived from the fact that noticeable expression is most often on the ray florets of a developing flower.

- (A) Petals on one side of the flower turn dark brown or black from their base outward and tend to stick together.
- (B) Rot may progress down the flower stem.
- (C) Blossom falls apart.
- (D) The leaves and unopened buds also may be attacked, producing a mushy, black-brown spotting and rotting under continued moist and moderate temperature conditions. The rot may extend from the leaves into the stem causing a brown to black lesion which may eventually girdle the stem and cause death at the top of the plant. In severe causes rot will weaken the stems sufficiently to permit flopping over of the flower heads.
- (E) The infected leaf tissue may resemble Septoria leaf spot but it is usually distinguished by the lack of circular spot pattern common to Septoria and the presence of yellowing of tissue next to an infection of Ascochyta.

The fungus can withstand extremes of temperature and moisture and can lie dormant for prolonged periods and yet be destructive when reactivated.

Control. When the crop is finished, thoroughly clean the growing area and destroy all chrysanthemum tissue collected. Once the fungus infects the flowers no applications of fungicidal sprays can stop the disease, therefore it is essential that a regular prevention program be followed. Lower the humidity as much as practical and spray on a regular schedule until buds show. At bud appearance alternate spraying the flower from below and above using PARZATE and ORTHOCIDE 50W at one ounce per 4 gallons of water plus one-third teaspoonful of DuPont spreader-sticker. This should be repeated at no less than 5-day intervals. In cloth houses rains should always be followed with sprays regardless of frequency. However, if frequency is occurring closer than 5-day intervals reduce the quantity of spray material and the spreader sticker to ½ the regular rate. During periods of excessively high humidity additions of MANZATE ½ lb. per 100 gallons of water also has been effective. There is some evidence to show that CAPTAIN (ORTHOCIDE 50W) will produce fading of open flowers more readily than Parzate. Fading of flowers also has been reported by growers when excessive use of stickers and spreaders has been permitted.

(2) BOTRYTIS

- Symptoms. The organism may attack any part of a chrysanthemum plant during its normal growing cycle and frequently cause the greatest losses on mature flowers in transit. Expression of the disease varies considerably from Ascochyta.
 - (A) It does not attack the flower bud from the inside and is usually found on a more mature or fully-opened flower.
 - (B) Foliage infections are characteristically soft brown and upon drying do not have any distinguishing features.
 - (C) Botrytis is found most often on the foliage shaded in the center of the bench.
 - (D) Mature infections will produce visible threads of mycelium that upon drying are white in color.
 - (E) The organism most readily attacks injured tissue such as that burned from excess of fertilizer and sunburn.
- Control. Reduce the quantity of free water that stands on flowers and foliage as much as possible. Do not ship moist flowers.

Spray regularly with PARZATE and ORTHO-CIDE 50W at same rate and frequency used for Ascochyta control. CM19 may also be used as a foliar spray. CM19 has been successfully used as a Botrytis eradicant when applied frequently to Botrytis susceptible, lower foliage of the plants at the rate of one pint per 100 gallons of water.

RUST

- Symptoms. Chocolate brown powdery pustules on lower surface of the leaves.
- Control. PARZATE, one ounce to 4 gallons of water is most effective.



DISEASES AND THEIR CONTROL

SCLEROTINA

Symptoms. The organism is easily recognized by the dense, white wet-appearing, cottony mass-like growth in which are found hard black seed like sclerotia. Under field conditions air-borne spores develop and subsequent infection makes it more difficult to control. Expression of the disease is rarely seen on greenhouse chrysanthemums and then only when poor regulation of temperature and humidity prevail.

Under cool, moist, often prolonged foggy periods in the field it will attack mature, healthy plants and cause death of plants through wilting.

Control. Ventilate properly. Remove the infected plant material and burn. Spray lower foliage with TERRACHLOR at the rate of 1½ to 2 pounds to 100 gallons of water. Be careful to clean up and burn all crop residue. Hard sclerotia are able to reinfect plants years after the initial infection.

SEPTORIA LEAF SPOT OR LEAF BLIGHT

Symptoms. Distinct circular spots on the foliage. These are grayish-brown in color and become brittle in the center. Affected leaves may turn yellow and die. The disease is more prevalent in the open. Some varieties are more susceptible than others. The variety, Sea Gull is very susceptible.

Control. When cuttings are received, dunk the tops into FERMATE (2 tablespoons to a gallon). Spray the plants with PARZATE at the rate of one ounce to 4 gallons of water plus one-third teaspoonful of DuPont spreader-sticker every 10 to 14 days. Cloth house mums should be kept covered until the buds can be seen.

VERTICILLIUM WILT OR SEIDEWITZ DISEASE

Symptoms. Margins of leaves turn yellow and eventually wilt or dry up. This begins at base of plant and works up the stem. May affect one side of a stem or plant more than the other. No distinct spots. Varieties vary in resistance to this disease.

Control. Verticillium wilt can be avoided by purchasing our disease-free cuttings produced from cultured stock. It is also necessary to plant only into sterilized soil. Steam and MC2 only known effective soil sterilants.

VIRUSES

The word "virus" is being referred to by the medical profession as well as by the florists, and a short explanation of virus should prove of interest.

Viruses of the chrysanthemum are considered to be infectious; that is they can be transmitted to a healthy plant only by contact with an infected plant. They are not carried in the soil, water or air as are other diseases caused by fungi and bacteria.

The virus particles cannot be seen by the most powerful microscopes. Most of them will pass through bacterial filters. They respond like living organisms. They are always present in the sap of diseased plants and can be transmitted to a healthy plant through wounds or by mechanical means. The chrysanthemum is known to be affected with 5 viruses, namely yellows, Aspermy, rosette, mosaic and stunt. Stunt is the only one that has caused much concern. It has been found that aphids as well as mechanical handling will cause stunt to spread.

Once a plant is infected with a virus, it usually always remains affected. To define a virus, the following is as good as any: A virus is a protein which requires the presence of living cells for multiplication and it causes changes in the structure and functions of living cells.



Septoria Leaf Spot

LESTS AND THEIR CONTROL

AR NEMATODE

The spread of this pest has been very rapid in recent years owing to the increased trade in chrysanthemums and the ease with which the nematode is transported in plants and cuttings. Too few growers have become familiar with this pest, and consequently no effort has been put forth to control it.

The leaves attacked become blotched, turn at first greenish-yellow, then brownish, later gray and finally black until the entire leaf dies and hangs down on the stem. Under conditions of high humidity both in the open during a wet season and under glass due to excessive watering, the spread of the pest may be extremely rapid.

100 square feet has given good control. Wait 2 to 4 weeks after benching before applying. It is better to apply P40 in 2 applications, $1\frac{1}{2}$

pounds each time, 7 to 10 days apart. The latest findings show that foliar nematodes can be controlled with **Parathion** either as an aerosol or liquid spray. **Systox** emulsion applied as soil drench 2-4 weeks after planting is effective.

COMBINATION SPRAYS

At times it is more economical and convenient to mix two or more sprays and apply them in one operation. Before such mixtures are prepared, the grower should be sure no reaction harmful to the plants will occur, and that the efficiency of the separate ingredients is not reduced. Consult your State Entomologist or Plant Pathologist for information on combination sprays for specific crops.

A good combination spray for chrysanthemums which will control most diseases and insect pests, can be made with Lindane, Parzate, DDT and Vapotone. Details on dilutions are as follows:

| MATERIAL | AMOU | AMOUNT TO MAKE | | |
|-------------------------|---------------------|-------------------------|-------------------------|--|
| WATER | 100 GALLONS | 20 GALLONS | 3 GALLONS | |
| DuPont Spreader-Sticker | 6 oz. | 2 tablesp. | 1 teasp. | |
| Lindane | 1 lb. | 3 ounces | $1\frac{1}{2}$ tablesp. | |
| Parzate | $1\frac{1}{2}$ lbs. | 5 ounces | 2 tablesp. | |
| Deenate 50W | 2 lbs. | 6 ounces | 3 tablesp. | |
| *Vapatone | ½ pt. | $3\frac{1}{2}$ tablesp. | $1\frac{1}{2}$ teasp. | |

^{*}Parathion, Aramite or Endrin may be used in place of Vapatone in this combination spray.

To prepare: (1) Measure out spreader and dilute in small quantity of water. (2) Fill tank with required water and add the diluted spreader and stir. (3) Take out a small amount in jar, add the proper amount of Parzate and shake vigorously until all the powder is thoroughly wetted. (4) Pour this mixture back into the tank, preferably through a fine screen or cheesecloth and stir. (5) Measure out Vapatone and dilute in small amount of water and add to the tank. Keep stirring or keep agitator running while adding the materials.

MATERIAL AND AMOUNT (per 100 gallons of water for spraying)

- 1.2 pounds 15% Aramite wettable powder
- 2. 1 pound Captan wettable powder
- 3. 1 pound Chlordane 50% wettable powder
- 4. 1 pound 251/2 Chlorobenzilate wettable powder
- 5. 1 pint CM19—Emulsifiable solution
- 6.2 pounds 25% Diazanon wettable powder
- 7.2 pounds 50% DDT wettable powder
- 8. 1 pound Dieldrin 25% wettable powder
- 9.1 pint 25% Dimite emulsifiable solution
- 10. 1 quart Endrin emulsifiable solution
- 11. 1½ pounds Fermate wettable powder
- 12. 1 pound 25 % Lindane wettable powder

- 13.11/2 pints 50 % Malathion emulsifiable solution
- 14.2 pounds 25% Malathion wettable powder
- 15.11/2 pounds 15% Parathion wettable powder
- 16. 11/2 pounds Parzate wettable powder
- 17. 1/4 pint 40 % TEPP emulsifiable solution
- 18. ½ pint 20% TEPP emulsifiable solution
- 19.1 to 1½ pounds 25% Kelthane wettable powder
- 20.1 pint 25% Kelthane emulsifiable solution
- 21. 1/2 pint Systox emulsifiable solution
- 22.1 pound Tedion 25% wettable powder
- 23.1 pound Terrachlor 75% wettable powder



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

BLOOM - MAY 15, 1961

| LATITUDE | PLANT | PINCH* | LIGHTING PERIOD | START SHADE | RESPONSE |
|------------------|---------|---------|--|------------------------------|-----------------------------|
| 40 - 50° | Jan. 2 | Jan. 30 | Jan. 2 - Mar. 6 Jan. 2 - Mar. 13 Jan. 2 - Mar. 20 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |
| 35 - 40° | Jan. 9 | Feb. 7 | Jan. 9 - Mar. 6 Jan. 9 - Mar. 13 Jan. 9 - Mar. 20 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |
| 25 - 35 ° | Jan. 23 | Feb. 13 | Jan. 23 - Mar. 6 Jan. 23 - Mar. 13 Jan. 23 - Mar. 20 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |

BLOOM -- MAY 22, 1961

| 40 - 50° | Jan. 16 | Feb. 13 | Jan. 16 - Mar. 13 Jan. 16 - Mar. 20 Jan. 16 - Mar. 27 | Mar. 20 Mar. 27 Apr. 3 | 10 Weel 9 Weel 8 Weel |
|----------|---------|---------|---|------------------------------|-----------------------------|
| 25 - 40° | Jan. 30 | Feb. 20 | Jan. 30 - Mar. 13 Jan. 30 - Mar. 20 Jan. 30 - Mar. 27 | Mar. 20 Mar. 27 Apr. 3 | 10 Weel 9 Weel 8 Weel |

BLOOM - MAY 29, 1961

| 40 - 50° | Jan. 30 | Feb. 27 | Jan. 30 - Mar. 20 Jan. 30 - Mar. 27 Jan. 30 - Apr. 3 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |
|----------|---------|---------|--|------------------------------|-----------------------------|
| 25 - 40° | Feb. 6 | Feb. 27 | Feb. 6 - Mar. 20 Feb. 6 - Mar. 27 Feb. 6 - Apr. 3 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |

BLOOM - JUNE 5, 1961

| 25 - 50° | Feb. 13 | Mar. 6 | Feb. 13 - Mar. 27 Feb. 13 - Apr. 3 Feb. 13 - Apr. 10 | Mar. 27 Apr. 3 Apr. 10 | 10 Week 9 Week 8 Week |
|----------|---------|--------|--|------------------------------|-----------------------------|
| | | | | April 10 | o week |

BLOOM - JUNE 12, 1961

| 25 - 50° | Feb. 20 | Mar. 13 | Feb. 20 - Apr. 3 Feb. 20 - Apr. 10 Feb. 20 - Apr. 17 | Apr. 3 Apr. 10 Apr. 17 | 10 Week 9 Week 8 Week |
|----------|---------|---------|--|------------------------------|-----------------------------|

YEAR-ROUND FLOWERING SCHEDULE

VARIETIES IN RESPONSE GROUPS

| | 10 WEEK | 9 WEEK | 8 WEEK |
|-----------------|-------------------------|-----------------------|----------------|
| | Imp. Ind. White | Donlope's Wh. Sp. | Wh. Pink Chief |
| | Crystal Queen | Queen's Lace | Silver Sheen |
| | Fred Shoesmith | Wh. Mary Garden | |
| | | | |
| | Sovereign | Silvertone | Echo |
| | Hurricane | Cloudbank | Blizzard |
| | Ping Pong | White Popcorn | Pristine |
| | Whitetop | White Keepsake | |
| WHITE | Icebera | Pinocchio | |
| | Snow Crystal | Alabaster | |
| | P Dawn Star | Memento | |
| | Coronado | Halo | |
| | Illini Igloo | Alaska | |
| | Shasta | Thistledown | |
| | | Illistiedowii | |
| | Skyline | | |
| | Stardust | | |
| | Illini Snowdrift | | |
| | Imp. Ind. Yellow | Mecca | Blazing Gold |
| | Ind. Gold | Luyona | Butterball |
| | S Explorer | Gold Lace | |
| | Gol. Yel. Princess Anne | Golden Boy | |
| | No. 2 Yellow Queen | Golden Boy | |
| | No. 2 Yellow Queen | | |
| | Goldtop | Yellow Keepsake | Yellow Calumet |
| | Aztec | Gold Coast | Topflight |
| VELLOW. | Golden Bantam | Happiness | |
| YELLOW | Yellow Beauregard | Sunbeam | |
| | No. 2 Yellow Iceberg | Flair | |
| | P Golden Crystal | No. 2 Dandy | |
| | Golden Shasta | Statesman | |
| | Yellow Igloo | Brilliancy | |
| | Heyday | Yellowchip | |
| | Golden Stardust | Starbright | |
| | Jackstraw | Sunup | |
| | Jackstraw | Saliup | |
| | Dk. Ind. Bronze | Mrs. Palmero | Amber Bright |
| | S Nomago | Symbol | Mayford Titan |
| | Golden Gate | Fred Yule | |
| | Copper Queen | | |
| RONZE | | | Calumet |
| & | Tuneful | Panorama | Dark Calumet |
| RED | Bronze Delight | Resolute | Dark Calumet |
| | Dillon Beauregard | Gaiety | |
| | P Wizard | Buckskin | |
| | Giltglow | Bronzechip | |
| | Amberhue | Copperchip | |
| | | Tanfastic | |
| | | Pumbu | Pink Chief |
| | Ind. Pink | Bunbu Miss America | FIR CITE |
| | S Princess Anne | Wilss America | |
| | No. 2 Dark Queen | | |
| D 12.155 | Delight | Bluechip | Enterprise |
| PINK | Overture | Cherrychip | Accolade |
| | Portrait | Darkchip | Mirth |
| | P Pennant | Tempo | |
| | · · remail | | |
| | | | |
| | Excello Cheerful | | |



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

BLOOM - JUNE 19, 1961

| | | DECOM | 00112 177 179. | | |
|----------|---------|---------------------------------------|-------------------|----------------|-------------------|
| LATITUDE | PLANT | PINCH* | LIGHTING PERIOD | START SHADE | RESPONSI GROUP |
| | | | Feb. 27 - Apr. 10 | Apr. 10 | 10 Week |
| 25 - 50° | Feb. 29 | Mar. 20 | Feb. 27 - Apr. 17 | Apr. 17 | 9 Week |
| 25 - 50 | reb. 23 | Wiai. Lo | Feb. 27 - Apr. 24 | Apr. 24 | 8 Week |
| • | | BLOOM - | – JUNE 26, 1961 | | |
| | | | Mar. 6 - Apr. 17 | Apr. 17 | 10 Week |
| 25 - 50° | Mar. 6 | Mar. 27 | Mar. 6 - Apr. 24 | Apr. 24 | 9 Week |
| 25 - 50 | War. 0 | Mail L | Mar. 6 - May 1 | May 1 | 8 Week |
| | | BLOOM - | — JULY 3, 1961 | | |
| | | | Mar. 13 - Apr. 24 | Apr. 24 | 10 Week |
| 25 - 50° | Mar. 13 | Apr. 3 | Mar. 13 - May 1 | May 1 | 9 Week |
| 25 - 55 | | | Mar. 13 - May 8 | May 8 | 8 Week |
| | | BLOOM - | - JULY 10, 1961 | | |
| 1 | | | Mar. 20 - May 1 | May 1 | 10 Week |
| 25 - 50° | Mar. 20 | Apr. 10 | Mar. 20 - May 8 | May 8 | 9 Week |
| | | • • • • • • • • • • • • • • • • • • • | Mar. 20 - May 15 | May 15 | 8 Week |
| | | BLOOM - | – JULY 17, 1961 | | |
| | | | Mar. 27 - May 1 | May 8 | 10 Week |
| 25 - 50° | Mar. 27 | Apr. 17 | Mar. 27 - May 8 | May 15 | 9 Week |
| | | | Mar. 27 - May 15 | May 22 | 8 Week |
| | | BLOOM - | - JULY 24, 1961 | | |
| | | | Apr. 3 - May 1 | May 15 | 10 Week |
| 25 - 50° | Apr. 3 | Apr. 24 | Apr. 3 - May 8 | May 22 | 9 Week |
| | • | • | Apr. 3 - May 15 | May 29 | 8 Week |
| | | BLOOM - | - JULY 31, 1961 | | |
| | | | Apr. 10 - May 1 | May 22 | 10 Week |
| 25 - 50° | Apr. 10 | May 1 | Apr. 10 - May 8 | May 29 | 9 Week |
| | | | Apr. 10 - May 15 | June 5 | 8 Week |
| | | BLOOM — | AUGUST 7, 1961 | | |
| | | | Apr. 17 - May 1 | May 29 | 10 Week |
| 25 - 50° | Apr. 17 | May 8 | Apr. 17 - May 8 | June 5 | 9 Week |
| | | | Apr. 17 - May 15 | June 12 | 8 Week |
| | | BLOOM — | AUGUST 14, 1961 | | |
| | | | Apr. 24 - May 1 | June 5 | 10 Week |
| 25 - 50° | Apr. 24 | May 15 | Apr. 24 - May 8 | June 12 | 9 Week |
| | | | Apr. 24 - May 15 | June 19 | 8 Week |

TY DESCRIPTION

YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

BLOOM - AUGUST 21, 1961

| LATITUDE | PLANT | PINCH* | START SHADE | RESPONSE |
|----------|--------|------------------|-------------------------------|-----------------------------|
| 25 - 50° | May 1 | May 22 | June 12 June 19 June 26 | 10 Week 9 Week 8 Week |
| | BLOC | M — AUGUST 28, | 1961 | |
| 25 - 50° | May 8 | May 29 | June 19 June 26 July 3 | 10 Week 9 Week 8 Week |
| | BLOO | M — SEPTEMBER 4, | 1961 | |
| 25 - 50° | May 15 | June 5 | June 26 July 3 July 10 | 10 Week 9 Week 8 Week |

^{*} For No Pinch Method: Plant on Pinch Date

VARIETIES IN RESPONSE GROUPS

| | 10 WEEK | 9 WEEK | 8 WEEK |
|-------------|---|--|--|
| S | Giant Betsy Ross The Favourite | Marblehead Donlope's Wh. Sp. Queen's Lace Themesong | Wh. Pink Chief Silver Sheen |
| WHITE P | Sovereign Hurricane Ping Pong Whitetop Iceberg Snow Crystal Dawn Star Coronado Illini Igloo Viscount Shasta Skyline Stardust Illini Snowdrift | Silvertone Cloudbank Popcorn White Popcorn Keepsake Pinocchio Alabaster Memento Whitechip Alaska Thistledown | Echo Blizzard Pristine |
| s | Yellow Betsy Ross Everest Gol. Yel. Princess Anne Rainier | Golden Marblehead Luyona Good News Golden Boy | Amber Bright Blazing Gold Butterball |
| YELLOW | Crescendo Yellow Beauregard No. 2 Yellow Iceberg Golden Crystal | Yel. Silvertone Yel. Keepsake Happiness Sunup | Yellow Calumet Topflight |
| P | Golden Shasta Yellow Igloo Yel. III. Snowdrift Fanfare | Sunbeam No. 2 Dandy Statesman Yellowchip | |
| S BRONZE | Golden Gate Br. Princess Anne | Symbol Fred Yule | |
| & RED P | Red Jetfire Dillion Beauregard Wizard | Panorama Bronze Dot Buckskin Copperchip Tanfastic | Calumet Dark Calumet |
| S | Laughter | Bunbu Miss America | |
| PINK P | Overture Bluebird Pennant Excello | Pinkette Reward Bluechip Darkchip Cherrychip | Mirth |



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

BLOOM - SEPTEMBER 11, 1961

| LATITUDE | PLANT | PINCH* | START SHADE | RESPONSI GROUP |
|-----------------|---------|---------------------|-------------------------------|-------------------------------|
| 25 - 50° | May 22 | June 12 | July 3 July 10 | 10 Week 9 Week |
| | BLOC | OM - SEPTEMBER 18, | 1961 | |
| 25 - 50° | May 29 | June 19 | July 3 July 10 July 17 | 11 Week 10 Week 9 Week |
| · | BLOC | M — SEPTEMBER 25, | 1961 | |
| 25 - 50° | May 29 | June 19 | July 10 July 17 July 24 | 11 Week 10 Week 9 Week |
| | BLO | OM — OCTOBER 2, 19 | 261 | |
| 40 - 50° | June 5 | June 26 | July 17 July 24 July 31 | 11 Week 10 Week 9 Week |
| 25 - 40° | June 12 | July 3 | July 17 July 24 July 31 | 11 Week 10 Week 9 Week |
| | BLO | OM — OCTOBER 9, 19 | 261 | |
| 40 - 50° | June 12 | July 3 | July 24 July 31 Aug. 7 | 11 Week 10 Week 9 Week |
| 25 - 40° | June 19 | July 10 | July 24 July 31 Aug. 7 | 11 Week 10 Week 9 Week |
| | BLOG | OM — OCTOBER 16, 19 | 961 | |
| 40 - 50° | June 12 | July 3 | July 31 Aug. 7 Aug. 14 | 11 Week 10 Week 9 Week |
| 25 - 40° | June 26 | July 17 | July 31 Aug. 7 Aug. 14 | 11 Week 10 Week 9 Week |
| | BLOC | OM — OCTOBER 23, 19 | 961 | |
| 40 - 50° | June 19 | July 10 | Aug. 7 Aug. 14 No | 11 Week 10 Week 9 Week |
| 25 - 40° | July 3 | July 24 | Aug. 7 Aug. 14 No | 11 Week 10 Week 9 Week |
| | BLOC | OM — OCTOBER 30, 19 | 961 | |
| 40 - 50° | June 26 | July 17 | Aug. 7 Aug. 14 Aug. 21 | 12 Week 11 Week 10 Week |
| 30 - 40° | July 3 | July 24 | Aug. 7 Aug. 14 Aug. 21 | 12 Week 11 Week 10 Week |
| 25 - 30° | July 10 | July 31 | Aug. 7 Aug. 14 Aug. 29 | 12 Week 11 Week 10 Week |



VARIETIES IN RESPONSE GROUPS

| | 12 WE | EK 11 WEEK | 10 WEEK | 9 WEEK | 8 WEEK |
|------------------------|--|---|--|--|----------------------------------|
| : | White Peter J | ohn Marketeer | Giant No. 4 Ind. White Columbia Imp. Ind. White Crystal Queen Giant Betsy Ross | Donlope's Wh. Sp. Queen's Lace Albatross Themesong | White Pink Chief Silver Sheen |
| WHITE | White Princes Silvercrest Illini Peace Illini Glacier | S White Taffeta Divinity Sculpture Jupiter Highbrow Bride Lightning | Sovereign Hurricane Ping Pong Whitetop Iceberg Encore Dawn Star Coronado Illini Igloo Shasta Cloudburst Milady Skyline Stardust Illini Snowdrift | Silvertone White Popcorn White Keepsake Pinocchio Memento Alaska Cloudbank Alabaster | Echo Blizzard Pristine |
| | Yellow Peter | John Harvester | Imp. Ind. Yellow Explorer Everest Gol. Yel. Princ. Anne No. 2 Yellow Queen Rainier | Luyona Gold Lace Good News Golden Boy | Blazing Gold Butterball |
| /ELLOW | Goldsmith Highlander Illini Wampun Golden Fortun Omega Yellow Galaxy | e Old Gold Forty Niner | Imperial Goldtop Golden Bantam Yellow Beauregard No. 2 Yel. Iceberg Golden Crystal Jackstraw Golden Shasta Heyday Golden Stardust | Yellow Keepsake Gold Coast Happiness Sunup Sunbeam Flair Statesman Brilliancy Yellowchip Starbright | |
| 9 | Br. Peter John | Maple Leaves Mrs. Eisenhower Balcomb Perfection Valentine | Dk. Ind. Bronze Woking Scarlet Br. Princess Anne Copper Queen | Chambrier Symbol Detroit News Fred Yule | Amber Bright Mayford Titan |
| RONZE & RED F | Dragon Galaxy Bronze Goldsn Crackerjack | Beauregard Supreme Bronze Etude Copper Jubilation Dark Bronze Ranger Rebel Cardinal Rubaiyat Thelma | Tuneful Red Jetfire Bronze Delight Dillon Beauregard Wizard Climax Giltglow Amberhue | Gaiety Bronzechip Copperchip Peachchip Tanfastic Buccaneer Red Daisy Bronze Dot | Calumet Dark Calumet Rajah |
| s | Pink Peter Joh | n Thanksgiving Pink | Ind. Pink Bluebird Princess Anne Orchid Queen No. 2 Dk. Queen | Bunbu Miss America | Pink Chief |
| PINK P | Hi-Fi Legend Delmar Splendor Royal Prom | Jubilation Pink Jubilation Staccato Blue Skies Delmarvel Signet | Delight Overture Portrait Pennant Excello Cheerful | Bluechip Cherrychip Pearlchip | Accolade Mirth |



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

BLOOM - NOVEMBER 6, 1961

| LATITUDE | PLANT | PINCH* | LIGHTING PERIOD | START SHADE | RESPONSE GROUP |
|----------|---------|---------|----------------------------------|-------------------------------|-------------------------------|
| 40 - 50° | June 26 | July 17 | None None Aug. 1 - Aug. 28 | Aug. 14 Aug. 21 Aug. 28 | 12 Week 11 Week 10 Week |
| 30 - 40° | July 3 | July 24 | None None Aug. 1 - Aug. 28 | Aug. 14 Aug. 21 Aug. 28 | 12 Week 11 Week 10 Week |
| 25 - 30° | July 10 | July 31 | None None Aug. 1 - Aug. 28 | Aug. 14 Aug. 21 Aug. 28 | 12 Week 11 Week 10 Week |

BLOOM - NOVEMBER 13, 1961

| 40 - 50° | July 3 | July 24 | None None None Aug. 1 - Sept. 4 | Aug. 14 Aug. 21 Aug. 28 No | 13 Week 12 Week 11 Week 10 Week |
|----------|---------|---------|--|-------------------------------------|--|
| 30 - 40° | July 10 | July 31 | None None None Aug. 1 - Sept. 4 | Aug. 14 Aug. 21 Aug. 28 No | 13 Week 12 Week 11 Week 10 Week |
| 25 - 30° | July 17 | Aug. 7 | None None Aug. 1 - Sept. 4 | Aug. 22 Aug. 29 No | 12 Week 11 Week 10 Week |

BLOOM - NOVEMBER 20, 1961

| 40 - 50° | July 10 | July 31 | None None Aug. 7 - Sept. 4 Aug. 1 - Sept.11 | Aug. 21 Aug. 28 No No | 13 Week 12 Week 11 Week 10 Week |
|----------|---------|---------|--|--------------------------------|--|
| 30 - 40° | July 17 | Aug. 7 | None None Aug. 7 - Sept. 4 Aug. 1 - Sept.11 | Aug. 21 Aug. 28 No No | 13 Week 12 Week 11 Week 10 Week |
| 25 - 30° | July 24 | Aug. 14 | None Aug. 7 - Sept. 4 Aug. 1 - Sept. 11 | Aug. 28 No No | 12 Week 11 Week 10 Week |

BLOOM -- NOVEMBER 27, 1961

| 40 - 50 ° | July 17 | Aug. 7 | None None Aug. 14 - Sept. 4 Aug. 7 - Sept.11 Aug. 1 - Sept.18 | Aug. 21 Aug. 28 No No No | 14 Week 13 Week 12 Week 11 Week 10 Week |
|------------------|---------|---------|---|--------------------------------------|---|
| 30 - 40° | July 24 | Aug. 14 | None None Aug. 14 - Sept. 4 Aug. 7 - Sept.11 Aug. 1 - Sept.18 | Aug. 21 Aug. 28 No No No | 14 Week 13 Week 12 Week 11 Week 10 Week |
| 25 - 30° | July 31 | Aug. 21 | Aug. 14 - Sept. 4 Aug. 7 - Sept.11 Aug. 1 - Sept.18 | No No No | 12 Week 11 Week 10 Week |

^{*} For No Pinch Method: Plant and Light on Pinch Date



VARIETIES IN RESPONSE GROUPS

| | 14 WEEK | 13 WEEK | 12 WEEK | 11 WEEK | 10 WEEK |
|---------------|--|--|--|--|---|
| S | | Smith's White Dec. White | imp. Wh. Peter John Chattanooga December Glory | Sterling Marketeer | Imp. Ind. White Giant No. 4 Ind. Wh Giant Betsy Ross Crystal Queen Mefo Columbia Fred Shoesmith |
| WHITE P | Trenton Silversmith Snowcap Elegance | Icecap Acclaim Illini Alba Iceflo Satellite Snowcrest | White Princess Silvercrest Illini Peace Illini Glacier | White Taffeta Sculpture Lightning Bride Jupiter Divinity Surfside Highbrow | Sovereign Hurricane Ping Pong Whitetop Iceberg Encore Snow Crystal Dawn Star Coronado Cloudburst Shasta Milady Skyline Stardust Illini Igloo Illini Snowdrift |
| S | | Tobin's Yellow Smith's Yellow Meteore | Yellow Peter John Dk. Yel. Chat'n'ga Golden Pearson No. 2 Yellow Glory | Friendly Rival Harvester Marie DePetris | Imp. Ind. Yellow Explorer Everest Gol. Yel. Princ. Anne No. 2 Yellow Queen No. 2 Yel. Shoesmith Rainler |
| YELLOW | III. Brighteyes Gol. Elegance Sun Valley Vibrant Sunrise | Kingpin Coronation Gol. Acclaim Spungold Corsair Yellow Snowcrest | Goldsmith Highlander Illini Wampum Golden Fortune Omega Yellow Galaxy | Etude Souvenir Highball Old Gold Forty Niner Shane Illini Goldrift Lollipop Klondike Golden Paramount | Goldtop Golden Bantam Yellow Beauregard Yellow Iceberg Imperial Golden Crystal Golden Shasta Heyday Golden Stardust Jackstraw |
| S | | Red Shoesmith Sal. Ruby Shoesmith Sal. Br. Shoesmith Sal. Apr. Shoesmith Sal. | Br. Peter John Gladys Pearson No. 2 Oak Leaf | Maple Leaves Balcombe Perfection Red Balcombe Perf. Mrs. Eisenhower Calvert's Gold | Dk. Ind. Bronze Woking Scarlet Golden Gate Br. Princess Anne Copper Queen Mrs. Roy |
| & RED P | Bronze Alvoda Christ. Greet'g Beau Brummell III. Homespun Poinsettia | Christmas Star Dk. Br. Minstrel Flame Minstrel | Dragon Galaxy Bronze Goldsmith Crackerjack | Beauregard Supreme Bronze Etude Copper Jubilation Dark Bronze Ranger Rebel Cardinal Rubaiyat Thelma | Tuneful Red Jetfire Bronze Delight Dillon Beauregard Giltglew Wizard Climax Amberhue |
| S | | Shoesmith Salmon | Pink Peter John | Calvert's Pink Thanksgiving Pink Ed Seidewitz | Ind. Pink Bluebird Princess Anne Rosamund Orchid Queen No. 2 Dk. Queen |
| P | Alvoda Riviera Lynda McLane | Eminence Debutante Minstrel Imp. Pink Minstrel | Hi-Fi Legend Delmar Splendor Royal Prom | Jubilation Pink-Jubilation Staccato Blue Skies Deimarvel Signet | Delight Overture Portrait Pennant Excello Cheerful |



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

| BLOOM — DECEMBER 4, 1961 | | | |
|--------------------------|--|-----------|----------------------------|
| RIOOM DECEMBED A 1961 | | | |
| | | | 3 4 1041 |
| | DI 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | HIELEMAN. | |
| DEGOIN DECEMBER 7, 1701 | DEG 0111 | | \ - 7, / 0 |

| LATITUDE | PLANT | PINCH* | LIGHTING PERIOD | START | RESPONSE |
|------------------|---------|-----------|---|----------------------------------|--|
| 40 - 50° | July 17 | Aug. 7 | None None Aug. 14 - Sept. 11 Aug. 7 - Sept. 18 | Aug. 21 No No No | 14 Week 13 Week 12 Week 11 Week |
| 30 - 40° | July 24 | Aug. 14 | Aug. 1 - Sept. 25 None None Aug. 14 - Sept. 11 | No Aug. 21 No No | 10 Week 14 Week 13 Week 12 Week |
| | | | Aug. 7 - Sept. 18 Aug. 1 - Sept. 25 Aug. 15 - Sept. 12 | No No | 11 Week 10 Week 12 Week |
| 25 - 30° | Aug. 7 | Aug. 28 | Aug. 8 - Sept. 19 Aug. 1 - Sept. 26 | No No | 11 Week 10 Week |
| | | BLOOM — D | ECEMBER 11, 1961 | No | 14 Week |
| 40 - 50° | July 24 | Aug. 14 | None Aug. 21 - Sept. 11 Aug. 14 - Sept. 18 Aug. 7 - Sept. 25 Aug. 1 - Oct. 2 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 35 - 4 0° | July 31 | Aug. 21 | None Aug. 21 - Sept. 11 Aug. 14 - Sept. 18 Aug. 7 - Sept. 25 | No No No No | 14 Week 13 Week 12 Week 11 Week |
| | | | Aug. 1 - Oct. 2 | No No | 10 Week 14 Week |
| 30 - 35° | Aug. 7 | Aug. 28 | Aug. 21 - Sept. 11 Aug. 14 - Sept. 18 Aug. 7 - Sept. 25 Aug. 1 - Oct. 2 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| | | BLOOM - D | ECEMBER 18, 1961 | 140 | 10 11001 |
| 40 - 50° | July 31 | Aug. 21 | None Aug. 28 - Sept. 11 Aug. 21 - Sept. 18 Aug. 14 - Sept. 25 Aug. 7 - Oct. 2 Aug. 1 - Oct. 9 | No No No No No | 15 Week 14 Week 13 Week 12 Week 11 Week 10 Week |
| 35 - 40° | Aug. 14 | Sept. 4 | None Aug. 28 - Sept. 11 Aug. 21 - Sept. 18 Aug. 14 - Sept. 25 Aug. 14 - Oct. 2 Aug. 14 - Oct. 9 | No No No No No | 15 Week 14 Week 13 Week 12 Week 11 Week 10 Week |
| 30 - 35° | Aug. 21 | Sept. 11 | Aug. 21 - Sept. 18 Aug. 21 - Sept. 25 Aug. 21 - Oct. 2 Aug. 21 - Oct. 9 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 25 - 30° | Aug. 21 | Sept. 11 | Aug. 21 - Sept. 25 Aug. 21 - Oct. 2 Aug. 21 - Oct. 9 | No No No | 12 Week 11 Week 10 Week |
| | | BLOOM - D | ECEMBER 25, 1961 | | |
| 40 - 50 ° | Aug. 7 | Aug. 28 | None Aug. 28 - Sept. 18 Aug. 21 - Sept. 25 Aug. 14 - Oct. 2 Aug. 7 - Oct. 9 Aug. 7 - Oct. 16 | No No No No No | 15 Week 14 Week 13 Week 12 Week 11 Week 10 Week |
| 35 - 40° | Aug. 14 | Sept. 4 | None Aug. 28 - Sept. 18 Aug. 21 - Sept. 25 Aug. 14 - Oct. 2 Aug. 14 - Oct. 9 Aug. 14 - Oct. 16 | No No No No No No | 15 Week 14 Week 13 Week 12 Week 11 Week 10 Week |
| 30 - 35° | Aug. 21 | Sept. 11 | Aug. 21 - Sept. 25 Aug. 21 - Oct. 2 Aug. 21 - Oct. 9 Aug. 21 - Oct. 16 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 25 - 30° | Aug. 28 | Sept. 18 | Aug. 28 - Oct. 2 Aug. 28 - Oct. 9 Aug. 28 - Oct. 16 | No No No | 12 Week 11 Week 10 Week |



VARIETIES IN RESPONSE GROUPS

| | 15 WEEK | 12 WEEK | 11 WEEK | 10 WEEK |
|-------------------------|--|---|--|--|
| s | | Imp. Wh. Peter John Chattanooga December Glory | Sterling Marketeer | Giant No. 4 Ind. Whit Crystal Queen Mefo Fred Shoesmith Columbia |
| WHITE P | Revelation Snow Talmeda Illini Cascade | Silvercrest Illini Peace White Valencia Fortune Illini Glacier | Bride Lightning Divinity Jupiter Highbrow Surfside | Skyline Iceberg Shasta Stardust Little America Illini Snowdrift |
| s | | Dk. Yel. Chat'n'ga No. 2 Yellow Glory | Harvester | Imp. Ind. Yellow Gol. Yel. Princ. Anne No. 2 Yellow Queen Yellow Mefo No. 2 Yel. Shoesmith |
| YELLOW | Siren Yuleflame Yellow Snow Yellow III. Cascade | Highlander Illini Wampum Yel. Valencia Golden Fortune Omega Yellow Galaxy | Highball Old Gold Souveuir Shane Illini Goldrift Lollipop | Yel. Beauregard No. 2 Yel. Iceberg Golden Shasta Yellow Igloo Imperial Heyday |
| S | | Imp. Br. Pet. John Gladys Pearson No. 2 Oak Leaf | Balcombe Perf. Red Balcombe Perf. Calvert's Gold | Dk. Ind. Bronze Golden Gate Br. Princess Anne Copper Queen |
| BRONZE & RED P | | Apr. Valencia Galaxy Holiday Crackerjack Dragon | Cop. Jubilation Cardinal Rebel Olnura Rubaiyat Bronze Etude | Jetfire Beauregard Bronze Delight Wizard Climax |
| s | | Pink Peter John | Calvert's Pink Thanks. Pink | Ind. Pink Princess Anne Orchid Queen No. 2 Dark Queen |
| PINK P | | HiFi Legend Delmar Splendor Royal Prom | Jubilation Pink Jubilation Signet Delmarvel Staccato | Delight Overture Cheerful |



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

| BLOOM | - JA | NUARY | 1, 1962 | |
|-------|------|-------|---------|--|

| LATITUDE | PLANT | PINCH* | LIGHTING PERIOD | START SHADE | RESPONSE GROUP |
|----------|----------|-----------|--|----------------|-------------------------------|
| 40 - 50° | Aug. 14 | Sept. 4 | Aug. 28 - Sept. 25 Aug. 21 - Oct. 2 Aug. 14 - Oct. 9 | No No No | 14 Week 13 Week 12 Week |
| | | | Aug. 14 - Oct. 16 Aug. 14 - Oct. 23 | No No | 11 Week 10 Week |
| | | | Aug. 28 - Sept. 25 Aug. 21 - Oct. 2 | No No | 14 Week 13 Week |
| 35 - 40° | Aug. 21 | Sept. 11 | Aug. 21 - Oct. 9 Aug. 21 - Oct. 16 | No No | 12 Week 11 Week |
| | | | Aug. 21 - Oct. 23 Aug. 28 - Oct. 2 | No No | 10 Week |
| 30 - 35° | Aug. 28 | Sept. 18 | Aug. 28 - Oct. 9 Aug. 28 - Oct. 16 | No No | 12 Week |
| | | | Aug. 28 - Oct. 23 | No | 10 Week |
| 25 - 30° | Sept. 4 | Sept. 25 | Sept. 4 - Oct. 9 Sept. 4 - Oct. 16 | No No | 12 Week 11 Week |
| | | BLOOM - | Sept. 4 - Oct. 23 JANUARY 8, 1962 | No | 10 Week |
| | | | Aug. 28 - Oct. 2 | No | 14 Week |
| 40 - 50° | Aug. 14 | Sept. 4 | Aug. 21 - Oct. 9 Aug. 14 - Oct. 16 | No No | 13 Week 12 Week |
| | | | Aug. 14 - Oct. 23 Aug. 14 - Oct. 30 | No No | 11 Week 10 Week |
| | | | Aug. 28 - Oct. 2 | No | 14 Week |
| 35 - 40° | Aug. 21 | Sept. 11 | Aug. 21 - Oct. 9 Aug. 21 - Oct. 16 | No No | 13 Week 12 Week |
| | | | Aug. 21 - Oct. 23 | No | 11 Week |
| | | | Aug. 21 - Oct. 30 Aug. 28 - Oct. 9 | No No | 10 Week |
| 30 - 35° | Aug. 28 | Sept. 18 | Aug. 28 - Oct. 16 | No | 12 Week |
| | | 35,151 | Aug. 28 - Oct. 23 Aug. 28 - Oct. 30 | No No | 11 Week 10 Week |
| 25 20° | 6 1 11 | | Sept. 11 - Oct. 16 | No | 12 Week |
| 25 - 30° | Sept. 11 | Oct. 2 | Sept. 11 - Oct. 23 Sept. 11 - Oct. 30 | No No | 11 Week 10 Week |
| | | BLOOM — J | ANUARY 15, 1962 | | |
| | | | Aug. 28 - Oct. 9 Aug. 21 - Oct. 16 | No No | 14 Week 13 Week |
| 40 - 50° | Aug. 21 | Sept. 11 | Aug. 21 - Oct. 23 | No | 12 Week |
| | | | Aug. 21 - Oct. 30 Aug. 21 - Nov. 6 | No No | 11 Week 10 Week |
| | | | Aug. 28 - Oct. 9 Aug. 28 - Oct. 16 | No No | 14 Week 13 Week |
| 35 - 40° | Aug. 28 | Sept. 18 | Aug. 28 - Oct. 23 | No | 12 Week |
| | | 33,000 | Aug. 28 - Oct. 30 Aug. 28 - Nov. 6 | No No | 11 Week 10 Week |
| | | | Sept. 4 - Oct. 16 | No | 13 Week |
| 30 - 35° | Sept. 4 | Sept. 25 | Sept. 4 - Oct. 23 Sept. 4 - Oct. 30 | No No | 12 Week |
| | | | Sept. 4 - Nov. 6 | No | 11 Week 10 Week |
| 25 - 30° | Sept. 18 | Oct. 9 | Sept. 18 - Oct. 23 | No | 12 Week |
| 25 - 50 | Sept. 10 | | Sept. 18 - Oct. 30 Sept. 18 - Nov. 6 | No No | 11 Week 10 Week |
| | | BLOOM — J | ANUARY 22, 1962 | | |
| | | | Aug. 28 - Oct. 16 Aug. 28 - Oct. 23 | No No | 14 Week 13 Week |
| 40 - 50° | Aug. 28 | Sept. 18 | Aug. 28 - Oct. 30 | No | 12 Week |
| | | | Aug. 28 - Nov. 6 Aug. 28 - Nov. 13 | No No | 11 Week 10 Week |
| | | | Sept. 4 - Oct. 16 | No | 14 Week |
| 35 - 40° | Sept. 4 | Sept. 25 | Sept. 4 - Oct. 23 Sept. 4 - Oct. 30 | No No | 13 Week 12 Week |
| | | | Sept. 4 - Nov. 6 | No | 11 Week |
| | | | Sept. 4 - Nov. 13 Sept. 11 - Oct. 23 | No No | 10 Week |
| 30 - 35° | Sept. 11 | Oct. 2 | Sept. 11 - Oct. 30 | No | 12 Week |
| | | | Sept. 11 - Nov. 6 | No | 11 Week |
| | 1 | | Sept. 11 - Nov. 13 | No | 10 Week |
| 25 - 30° | Sept. 18 | Oct. 9 | | No No No | 10 Week 12 Week 11 Week |

VARIETY DESCRIPTION

POT PLANT SCHEDULE

VARIETIES IN RESPONSE GROUPS

| | 14 WEEK | 13 WEEK | 12 WEEK | 11 WEEK | 10 WEEK |
|-------------------------|---|--|--|--|--|
| S | | | Imp. Wh. Peter John | | Giant No. 4 Ind. White Crystal Queen Mefo Fred Shoesmith Columbia |
| WHITE | Silversmith Snowcap | Icecap Acclaim Illini Alba Iceflo Satellite Snowcrest | | Bride Divinity Jupiter Sculpture Belray Surfside | Skyline Iceberg Illini Igloo Shasta Stardust Illini Snowdrift |
| s | | | Yellow Peter John | | Imp. Ind. Yellow Gol. Yel. Princ. Anne No. 2 Yellow Queen No. 2 Yel. Shoesmith |
| YELLOW | III. Brighteyes Sun Valley | Kingpin Coronation Gol. Acclaim Spungold Corsair Yellow Snowcrest | Omega Yellow Galaxy | Highball Old Gold Souvenir Shane Illini Goldrift | Yel. Beauregard No. 2 Yel. Iceberg Golden Shasta Yellow Igloo Imperial Heyday |
| S | | | Imp. Br. Peter John | Valentine | Dk. Ind. Bronze Golden Gate Br. Princess Anne Copper Queen |
| BRONZE & RED P | Bronze Alvoda Beau Brummell III. Homespun Merrymaker | | Galaxy Holiday Crackerjack Red Galaxy Dragon | Tan Vedova Cardinal Rebel | Beauregard Bronze Delight |
| s | | | Pink Peter John | Thanksgiving Pink | Ind. Pink Princess Anne Orchid Queen No. 2 Dark Queen |
| PINK | Alvoda Dark Alvoda Riviera | Eminence Debutante Pink Snowdrep | HiFi Legend Delmar Splendor Royal | Signet Delmarvel Vedova Venoya | Delight Cheerful |

1961



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

BLOOM - JANUARY 29, 1962

| LATITUDE | PLANT | PINCH* | LIGHTING PERIOD | START SHADE | RESPONSI GROUP |
|----------|----------|------------|---|----------------------|--|
| 40 - 50° | Aug. 28 | Sept. 18 | Aug. 28 - Oct. 30 Aug. 28 - Nov. 6 Aug. 28 - Nov. 13 Aug. 28 - Nov. 20 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 35 - 40° | Sept. 4 | Sept. 25 | Sept. 4 - Oct. 30 Sept. 4 - Nov. 6 Sept. 4 - Nov. 13 Sept. 4 - Nov. 20 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 30 - 35° | Sept. 18 | Oct. 9 | Sept. 18 - Oct. 30 Sept. 18 - Nov. 6 Sept. 18 - Nov. 13 Sept. 18 - Nov. 20 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 25 - 30° | Sept. 25 | Oct. 16 | Sept. 25 - Nov. 6 Sept. 25 - Nov. 13 Sept. 25 - Nov. 20 | No No No | 12 Week 11 Week 10 Week |
| | | BLOOM - F | EBRUARY 5, 1962 | | |
| 40 - 50° | Sept. 4 | Sept. 25 | Sept. 4 - Nov. 6 Sept. 4 - Nov. 13 Sept. 4 - Nov. 20 Sept. 4 - Nov. 27 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 35 - 40° | Sept. 11 | Oct. 2 | Sept. 11 - Nov. 6 Sept. 11 - Nov. 13 Sept. 11 - Nov. 20 Sept. 11 - Nov. 27 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 30 - 35° | Sept. 25 | Oct. 16 | Sept. 25 - Nov. 6 Sept. 25 - Nov. 13 Sept. 25 - Nov. 20 Sept. 25 - Nov. 27 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 25 - 30° | Oct. 2 | Oct. 23 | Oct. 2 - Nov. 20 Oct. 2 - Nov. 27 | No No | 11 Week 10 Week |
| | | BLOOM — FE | BRUARY 12, 1962 | | |
| 40 - 50° | Sept. 11 | Oct. 2 | Sept. 11 - Nov. 13 Sept. 11 - Nov. 20 Sept. 11 - Nov. 27 Sept. 11 - Dec. 4 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 35 - 40° | Sept. 18 | Oct. 9 | Sept. 18 - Nov. 13 Sept. 18 - Nov. 20 Sept. 18 - Nov. 27 Sept. 18 - Dec. 4 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 30 - 35° | Oct. 2 | Oct. 23 | Oct. 2 - Nov. 20 Oct. 2 - Nov. 27 Oct. 2 - Dec. 4 | No No No | 12 Week 11 Week 10 Week |
| 25 - 30° | Oct. 9 | Oct. 30 | Oct. 9 - Nov. 27 Oct. 9 - Dec. 4 | No No | 11 Week 10 Week |
| | | BLOOM — FI | EBRUARY 19, 1962 | | |
| 40 - 50° | Sept. 18 | Oct. 9 | Sept. 18 - Nov. 20 Sept. 18 - Nov. 27 Sept. 18 - Dec. 4 Sept. 18 - Dec. 11 | No No No No | 13 Week 12 Week 11 Week 10 Week |
| 35 - 40° | Sept. 25 | Oct. 16 | Sept. 25 - Nov. 27 Sept. 25 - Dec. 4 Sept. 25 - Dec. 11 | No No No | 12 Week 11 Week 10 Week |
| 30 - 35° | Oct. 9 | Oct. 30 | Oct. 9 - Nov. 27 Oct. 9 - Dec. 4 Oct. 9 - Dec. 11 | No No No | 12 Week 11 Week 10 Week |
| 25 - 30° | Oct. 16 | Nov. 6 | Oct. 16 - Dec. 4 Oct. 16 - Dec. 11 | No No | 11 Week 10 Week |

VARIETIES IN RESPONSE GROUPS

| | 13 WEEK | 12 WEEK | 11 WEEK | 10 WEEK |
|---------------|--|--|--|--|
| s | | | | Giant No. 4 Ind. Whit Crystal Queen Mefo Fred Shoesmith Columbia |
| WHITE | Icecap Acclaim Illini Alba Icefio Satellite Snowcrest | | Bride Divinity Jupiter Sculpture Belray Surfside | Skyline Iceberg Illini Igloo Shasta Stardust Illini Snowdrift |
| S | | | | Imp. Ind. Yellow Gol. Yel. Princ. Anne No. 2 Yellow Queen No. 2 Yel. Shoesmith |
| YELLOW | Kingpin Coronation Gold. Acclaim Spungold Corsair Yellow Snowcrest | Omega Yellow Galaxy | Highball Old Gold Souvenir Shane Illini Goldrift | Yellow Beauregard No. 2 Yel. Iceberg Golden Shasta Yellow Igloo Imperial Heydey |
| S BRONZE | | | | Dk. Ind. Bronze Golden Gate Br. Princess Anne Copper Queen |
| & RED P | | Galaxy Holiday Crackerjack Dragon Red Galaxy | Tan Vedova Cardinal Rebel | Beauregard Bronze Delight |
| S | | | | Ind. Pink Princess Anne Orchid Queen No. 2 Dark Queen |
| PINK P | Pink Snowdrop Debutante | HiFi Legend Delmar Splendor Royal | Signet Delmarvel Vedova Venoya | Delight Cheerful |



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

BLOOM - FEBRUARY 26, 1962

| | | DECOM: | | | |
|----------------------------------|------------------------------------|---|---|--|---|
| LATITUDE | PLANT | PINCH* | LIGHTING PERIOD | START SHADE | RESPONS GROUP |
| | | | Sept. 25 - Nov. 27 | No | 13 Week |
| 40 - 50° | 6-m4 25 | 004 46 | Sept. 25 - Dec. 4 | No | 12 Week |
| 40 - 50 | S ept. 25 | Oct. 16 | Sept. 25 - Dec. 11 | No | 11 Week |
| | | | Sept. 25 - Dec. 18 | No | 10 Week |
| | | | Oct. 9 - Dec. 4 | No | 12 Week |
| 35 - 40° | Oct. 9 | Oct. 30 | Oct. 9 - Dec. 11 | No | 11 Week |
| | | | Oct. 9 - Dec. 18 | No | 10 Week |
| | | | Oct. 16 - Dec. 4 | No | 12 Week |
| 30 - 35° | Oct. 16 | Nov. 6 | Oct. 16 - Dec. 11 | No | 11 Week |
| | | | Oct. 16 - Dec. 18 | No | 10 Week |
| 25 - 30° | Oct. 23 | Nov. 13 | Oct. 23 - Dec. 11 | No | 11 Week |
| | | | Oct. 23 - Dec. 18 | No | 10 Week |
| | | BLOOM — | MARCH 5, 1962 | | |
| | | | Oct. 2 - Dec. 4 | No | 13 Week |
| 40 - 50° | Oct. 2 | Oct. 23 | Oct. 2 - Dec. 11 | No | 12 Week |
| 40 - 00 | JUL. 2 | JUL. 23 | Oct. 2 - Dec. 18 | No | 11 Week |
| | | | Oct. 2 - Dec. 25 | No | 10 Week |
| | | | Oct. 16 - Dec. 11 | No | 12 Week |
| 35 - 40° | Oct. 16 | Nov. 6 | Oct. 16 - Dec. 18 | No | 11 Week |
| | | | Oct. 16 - Dec. 25 | No | 10 Week |
| | | | Oct. 23 - Dec. 11 | No | 12 Week |
| 30 - 35° | Oct. 23 | Nov. 13 | Oct. 23 - Dec. 18 | No | 11 Week |
| | | | Oct. 23 - Dec. 25 | No | 10 Week |
| 25 - 30° | Oct. 30 | Nov. 20 | Oct. 30 - Dec. 18 | No | 11 Week |
| | | | Oct. 30 - Dec. 25 | No | 10 Week |
| | | BLOOM — | MARCH 12, 1962 | | |
| | | | Oct. 9 - Dec. 11 | No | 13 Week |
| 40 - 50° | Oct. 9 | Oct. 30 | Oct. 9 - Dec. 18 | No | 12 Week |
| 40 - 50 | OCC. 3 | OCL. 50 | Oct. 9 - Dec. 25 | No | 11 Week |
| | | | Oct. 9 - Jan. 1 | No | 10 Week |
| | | | 0 . 00 0 .00 | | |
| 35 - 40° | | | Oct. 23 - Dec. 18 | No | 12 Week |
| 35 - 40 | Oct. 23 | Nov. 13 | Oct. 23 - Dec. 25 | No | 11 Week |
| | Oct. 23 | Nov. 13 | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 | | 11 Week 10 Week |
| 30 - 35° | | | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 | No No | 11 Week 10 Week 11 Week |
| 30 - 35° | Oct. 23 | Nov. 13 | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 | No No | 11 Week 10 Week 11 Week 10 Week |
| | | Nov. 20 | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 | No No No No | 11 Week 10 Week 11 Week 10 Week 11 Week |
| 30 - 35° 25 - 30° | Oct. 30 | | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 | No No No | 11 Week 10 Week 11 Week 10 Week |
| | Oct. 30 | Nov. 20 Dec. 4 | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 | No No No No | 11 Week 10 Week 11 Week 10 Week 11 Week |
| 25 - 30° | Oct. 30 Nov. 13 | Nov. 20 Dec. 4 BLOOM — | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 Nov. 13 - Jan. 1 MARCH 19, 1962 Oct. 16 - Dec. 25 | No No No No No | 11 Week 10 Week 11 Week 10 Week 11 Week 10 Week |
| | Oct. 30 | Nov. 20 Dec. 4 | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 Nov. 13 - Jan. 1 MARCH 19, 1962 Oct. 16 - Dec. 25 Oct. 16 - Jan. 1 | No No No No No | 11 Week 10 Week 11 Week 10 Week 11 Week 10 Week 11 Week 11 Week |
| 25 - 30° | Oct. 30 Nov. 13 | Nov. 20 Dec. 4 BLOOM — | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 Nov. 13 - Jan. 1 MARCH 19, 1962 Oct. 16 - Dec. 25 | No No No No No | 11 Week 10 Week 11 Week 10 Week 11 Week 10 Week |
| 25 - 30° 40 - 50° | Oct. 30 Nov. 13 | Nov. 20 Dec. 4 BLOOM — I | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 Nov. 13 - Jan. 1 MARCH 19, 1962 Oct. 16 - Dec. 25 Oct. 16 - Jan. 1 | No No No No No | 11 Week 10 Week 11 Week 10 Week 11 Week 10 Week 11 Week 11 Week 11 Week 11 Week |
| 25 - 30° | Oct. 30 Nov. 13 | Nov. 20 Dec. 4 BLOOM — | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 Nov. 13 - Jan. 1 MARCH 19, 1962 Oct. 16 - Dec. 25 Oct. 16 - Jan. 1 Oct. 16 - Jan. 8 | No No No No No No | 11 Week 10 Week 11 Week 10 Week 11 Week 10 Week 11 Week 10 Week 11 Week 11 Week 11 Week |
| 25 - 30° 40 - 50° 35 - 40° | Oct. 30 Nov. 13 Oct. 16 Oct. 30 | Nov. 20 Dec. 4 BLOOM — I Nov. 6 Nov. 20 | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 Nov. 13 - Jan. 1 MARCH 19, 1962 Oct. 16 - Dec. 25 Oct. 16 - Jan. 1 Oct. 16 - Jan. 8 Oct. 30 - Jan. 1 | No No No No No No No | 11 Week 10 Week 11 Week 10 Week 11 Week 10 Week 11 Week 11 Week 11 Week 11 Week |
| 25 - 30° 40 - 50° | Oct. 30 Nov. 13 | Nov. 20 Dec. 4 BLOOM — I | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 Nov. 13 - Jan. 1 MARCH 19, 1962 Oct. 16 - Dec. 25 Oct. 16 - Jan. 1 Oct. 16 - Jan. 8 Oct. 30 - Jan. 1 Oct. 30 - Jan. 8 | No No No No No No No | 11 Week 10 Week 11 Week 10 Week 11 Week 10 Week 11 Week 11 Week 11 Week 10 Week 11 Week 10 Week |
| 25 - 30° 40 - 50° 35 - 40° | Oct. 30 Nov. 13 Oct. 16 Oct. 30 | Nov. 20 Dec. 4 BLOOM — I Nov. 6 Nov. 20 | Oct. 23 - Dec. 25 Oct. 23 - Jan. 1 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 Nov. 13 - Dec. 25 Nov. 13 - Jan. 1 MARCH 19, 1962 Oct. 16 - Dec. 25 Oct. 16 - Jan. 1 Oct. 16 - Jan. 8 Oct. 30 - Jan. 1 Oct. 30 - Jan. 8 Nov. 6 - Jan. 1 | No N | 11 Week 10 Week 11 Week 10 Week 11 Week 10 Week 11 Week 11 Week 11 Week 11 Week 11 Week 11 Week |

VARIETIES IN RESPONSE GROUPS

| | 13 WEEK | 12 WEEK | 11 WEEK | 10 WEEK |
|-------------|---|--|---|--|
| s | | | | Giant No. 4 Ind. White Crystal Queen Mefo Fred Shoesmith Columbia |
| WHITE | Icecap Acclaim Illini Alba Icefio Snowcrest | | Bride Divinity White Taffeta Sculpture Jupiter Surfside Belray | Skyline Iceberg Illini Igloo Shasta Coronado Stardust Cloudburst |
| S | | | | Imp. Ind. Yellow Gol. Yel. Princ. Anne No. 2 Yellow Queen No. 2 Yellow Shoesmitl |
| YELLOW | Kingpin Coronation Golden Acclaim Spungold Corsair Yellow Snowcrest | Illini Wampum Omega Yellow Galaxy | Highball Old Gold Etude Souvenir Shane Illini Goldrift | Yellow Beauregard No. 2 Yellow Iceberg Golden Shasta Yellow Igloo Imperial Heydey |
| S BRONZE | | | | Dk. Ind. Bronze Golden Gate Br. Princess Anne Copper Queen |
| & RED P | | Galaxy Holiday Crackerjack Dragon Red Galaxy | Beauregard Supreme Br. Jubilation Theima Cardinal Rebel Olnura | Beauregard Bronze Delight Climax |
| S | | | | Ind. Pink Princess Anne Orchid Queen No. 2 Dark Queen |
| PINK P | Pink Snowdrop Debutante | HiFi Legend Delmar Splendor Royal | Signet Pink Jubilation Delmarvel Blue Skies Staccato | Delight Portrait Cheerful |



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

BLOOM - MARCH 26, 1962

| LATITUDE | PLANT | PINCH* | LIGHTING PERIOD | START SHADE | RESPONSE GROUP |
|-----------------|---------|---------|---|-------------------------------|------------------------------|
| 40 - 50° | Oct. 30 | Nov. 20 | Oct. 30 - Jan. 8 Oct. 30 - Jan. 15 | No No | 11 Week 10 Week |
| 35 - 40° | Nov. 6 | Nov. 27 | Nov. 6 - Jan. 8 Nov. 6 - Jan. 15 | No No | 11 Week 10 Week |
| 30 - 35° | Nov. 20 | Dec. 11 | Nov. 20 - Jan. 8 Nov. 20 - Jan. 15 | No No | 11 Week 10 Week |
| 25 - 30° | Nov. 27 | Dec. 18 | Nov. 27 - Jan. 15 Nov. 27 - Jan. 22 Nov. 27 - Jan. 29 | No No No | 10 Week 9 Week 8 Week |
| | | BLOOM - | - APRIL 2, 1962 | | |
| 40 - 50° | Nov. 6 | Nov. 27 | Nov. 6 - Jan. 15 Nov. 6 - Jan. 22 | No No | 11 Week 10 Week |
| 35 - 40° | Nov. 13 | Dec. 4 | Nov. 13 - Jan. 15 Nov. 13 - Jan. 22 | No No | 11 Week 10 Week |
| 30 - 35° | Nov. 27 | Dec. 18 | Nov. 27 - Jan. 15 Nov. 27 - Jan. 22 | No No No | 11 Week 10 Week 9 Week |
| 25 - 30° | Dec. 4 | Dec. 25 | Nov. 27 - Jan. 29 Dec. 4 - Jan. 22 Dec. 4 - Jan. 29 | No No | 10 Week 9 Week 8 Week |
| | | RIOOM - | Dec. 4 - Feb. 5 - APRIL 9, 1962 | No | o week |
| | | BEOOM | Nov. 13 - Jan. 22 | Mar. 12 | 11 Week |
| 40 - 50° | Nov. 13 | Dec. 11 | Nov. 13 - Jan. 29 Nov. 13 - Feb. 5 | Mar. 19 Mar. 26 | 10 Week 9 Week |
| 35 - 40° | Nov. 27 | Dec. 25 | Nov. 27 - Jan. 22 Nov. 27 - Jan. 29 Nov. 27 - Feb. 5 | Mar. 12 Mar. 19 Mar. 26 | 11 Week 10 Week 9 Week |
| 30 - 35° | Dec. 4 | Jan. 1 | Dec. 4 - Jan. 29 Dec. 4 - Feb. 5 Dec. 4 - Feb. 12 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 25 - 30° | Dec. 18 | Jan. 8 | Dec. 18 - Jan. 29 Dec. 18 - Feb. 5 Dec. 18 - Feb. 12 | Mar. 19 No No | 10 Week 9 Week 8 Week |
| | | BLOOM - | - APRIL 16, 1962 | | |
| 40 - 50° | Nov. 20 | Dec. 18 | Nov. 20 - Jan. 29 Nov. 20 - Feb. 5 Nov. 20 - Feb. 12 | Mar. 12 Mar. 19 Mar. 26 | 11 Week 10 Week 9 Week |
| 35 - 40° | Dec. 4 | Jan. 1 | Dec. 4 - Jan. 29 Dec. 4 - Feb. 5 Dec. 4 - Feb. 12 | Mar. 12 Mar. 19 Mar. 26 | 11 Week 10 Week 9 Week |
| 30 - 35° | Dec. 11 | Jan. 8 | Dec. 11 - Feb. 5 Dec. 11 - Feb. 12 Dec. 11 - Feb. 19 | Mar. 19 Mar. 26 No | 10 Week 9 Week 8 Week |
| 25 - 30° | Dec. 25 | Jan. 15 | Dec. 25 - Feb. 5 Dec. 25 - Feb. 12 Dec. 25 - Feb. 19 | Mar. 19 Mar. 26 No | 10 Week 9 Week 8 Week |
| | | BLOOM - | - APRIL 23, 1962 | | |
| 40 - 50° | Dec. 4 | Jan. 1 | Dec. 4 - Feb. 12 Dec. 4 - Feb. 19 Dec. 4 - Feb. 26 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 35 - 40° | Dec. 11 | Jan. 8 | Dec. 11 - Feb. 12 Dec. 11 - Feb. 19 Dec. 11 - Feb. 26 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 30 - 35° | Dec. 18 | Jan. 15 | Dec. 18 - Feb. 12 Dec. 18 - Feb. 19 Dec. 18 - Feb. 26 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 25 - 30° | Jan. 1 | Jan. 22 | Jan. 1 - Feb. 12 Jan. 1 - Feb. 19 Jan. 1 - Feb. 26 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |

^{*} For No Pinch Method: Plant and Light on Pinch Date



VARIETIES IN RESPONSE GROUPS

| | 11 WEEK | 10 WEEK | 9 WEEK | 8 WEEK |
|-------------------------|---|--|----------------------------------|----------------------------|
| s | | Giant No. 4 Ind. White Crystal Queen Mefo Fred Shoesmith Columbia | Donlopes Wh. Sp. Queen's Lace | White Pink Chief |
| WHITE P | Bride Divinity Lightning White Taffeta Sculpture Jupiter Surfside Paramount Belray | Sovereign Hurricane Ping Pong Iceberg Cloudburst Dawn Star Coronado Illini Igloo Shasta Skyline Stardust Illini Snowdrift | White Keepsake | |
| S | | Imp. Ind. Yellow Explorer Gol. Yel. Princ. Anne No. 2 Yellow Queen Yellow Mefo No. 2 Yel. Shoesmith | Luyona Gold Lace | Blazing Gold Butterball |
| YELLOW P | Highball Old Gold Etude Souvenir Yellow Sculpture Shane Illini Goldrift Lollipop Pippin | Imperial No. 2 Yellow Iceberg Yellow Beauregard Golden Crystal Golden Shasta Heyday Jackstraw Golden Stardust Yellow Igloo | Yellow Keepsake | |
| S | Maple Leaves | | Mrs. Palmero Bronze Palmero | Mayford Titan |
| BRONZE & RED P | Beauregard Sup. Cop. Jubilation Thelma Cardinal Rebel Olnura | Red Jetfire Bronze Delight Beauregard Climax No. 2 Red Humdinger Amberhue | | |
| s | | | Bunbu Miss America | Pink Chief |
| PINK | Signet Delmarvel Pink Jubilation Blue Skies Staccato | Delight Overture Portrait Pennant Excello | | |



YEAR-ROUND CHRYSANTHEMUM FLOWERING SCHEDULE

BLOOM - APRIL 30, 1962

| LATITUDE | PLANT | PINCH* | LIGHTING PERIOD | START SHADE | RESPONSI GROUP |
|------------------|---------|---------|---|------------------------------|-----------------------------|
| 40 - 50° | Dec. 11 | Jan. 8 | Dec. 11 - Feb. 19 Dec. 11 - Feb. 26 Dec. 11 - Mar. 5 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 35 - 40° | Dec. 18 | Jan. 15 | Dec. 18 - Feb. 19 Dec. 18 - Feb. 26 Dec. 18 - Mar. 5 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 25 - 35° | Jan. 8 | Jan. 29 | Jan. 8 - Feb. 19 Jan. 8 - Feb. 26 Jan. 8 - Mar. 5 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| | | BLOOM - | - MAY 7, 1962 | | |
| 40 - 50° | Dec. 25 | Jan. 22 | Dec. 25 - Feb. 26 Dec. 25 - Mar. 5 Dec. 25 - Mar. 12 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 35 - 40° | Jan. 1 | Jan. 29 | Jan. 1 - Feb. 26 Jan. 1 - Mar. 5 Jan. 1 - Mar. 12 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 25 - 35 ° | Jan. 15 | Feb. 5 | Jan. 15 - Feb. 26 Jan. 15 - Mar. 5 Jan. 15 - Mar. 12 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| | | BLOOM - | - MAY 14, 1962 | | |
| 40 - 50° | Jan. 1 | Jan. 29 | Jan. 1 - Mar. 5 Jan. 1 - Mar. 12 Jan. 1 - Mar. 19 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 35 - 40° | Jan. 8 | Feb. 5 | Jan. 8 - Mar. 5 Jan. 8 - Mar. 12 Jan. 8 - Mar. 19 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 25 - 35° | Jan. 22 | Feb. 12 | Jan. 22 - Mar. 5 Jan. 22 - Mar. 12 Jan. 22 - Mar. 19 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| | | BLOOM - | - MAY 21, 1962 | | |
| 40 - 50° | Jan. 15 | Feb. 12 | Jan. 15 - Mar. 12 Jan. 15 - Mar. 19 Jan. 15 - Mar. 26 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 25 - 40° | Jan. 29 | Feb. 19 | Jan. 29 - Mar. 12 Jan. 29 - Mar. 19 Jan. 29 - Mar. 26 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| | | BLOOM - | - MAY 28, 1962 | | |
| 40 - 50° | Jan. 29 | Feb. 26 | Jan. 29 - Mar. 19 Jan. 29 - Mar. 26 Jan. 29 - Apr. 2 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| 25 - 4 0° | Feb. 5 | Feb. 26 | Feb. 5 - Mar. 19 Feb. 5 - Mar. 26 Feb. 5 - Apr. 2 | Mar. 19 Mar. 26 Apr. 3 | 10 Week 9 Week 8 Week |
| | | BLOOM - | - JUNE 4, 1962 | | |
| 25 - 50° | Feb. 12 | Mar. 5 | Feb. 12 - Mar. 26 Feb. 12 - Apr. 2 Feb. 12 - Apr. 9 | Mar. 26 Apr. 2 Apr. 9 | 10 Week 9 Week 8 Week |
| | | BLOOM - | - JUNE 11, 1962 | | |
| 25 - 50° | Feb. 19 | Mar. 12 | Feb. 19 - Apr. 2 Feb. 19 - Apr. 9 Feb. 19 - Apr. 16 | Apr. 2 Apr. 9 | 10 Week 9 Week 8 Week |



VARIETIES IN RESPONSE GROUPS

| | 10 WEEK | 9 WEEK | 8 WEEK |
|-------------|--|---|----------------------------------|
| S | Giant No. 4 Ind. White Crystal Queen Fred Shoesmith Columbia | Donlope's Wh. Sp. Queen's Lace | White Pink Chief Silver Sheen |
| WHITE P | Sovereign Hurricane Ping Pong Iceberg Milady Cloudburst Dawnstar Coronado Illini Igloo Shasta Skyline Stardust | Silvertone Cloudbank White Popcorn White Keepsake Pinocchio Alabaster Memento Halo Alaska Thistledown | Echo Blizzard Pristine |
| | Illini Snowdrift | | |
| s | Imp. Ind. Yellow Ind. Gold Explorer Gol. Yel. Princess Anne No. 2 Yellow Queen No. 2 Yel. Shoesmith | Mecca Luyona Gold Lace | Blazing Gold Butterball |
| YELLOW P | Imperial Golden Bantam Yellow Beauregard No. 2 Yel. Iceberg Golden Crystal Jackstraw Golden Shasta Yellow Igloo Heyday Golden Stardust Yel. III. Snowdrift Fanfare | Yel. Silvertone Yel. Keepsake Gold Coast Happiness Sunup Sunbeam No. 2 Dandy Statesman Brilliancy Yellowchip Starbright | Yellow Calumet Topflight |
| S | Dk. Ind. Bronze Nomago Golden Gate Br. Princess Anne Copper Queen | Mrs. Palmero Symbol Fred Yule Chambrier | Amber Bright Mayford Titan |
| & RED | Tuneful Bronze Delight Dillon Beauregard Wizard Giltglow Amberhue | Panorama Gaiety Buckskin Bronzechip Copperchip Tanfastic | Calumet Dark Calumet |
| S | Ind. Pink Princess Anne No. 2 Dark Queen | Bunbu Miss America | Pink Chief |
| PINK P | Delight Overture Portrait Pennant Excello Cheerful | Bluechip Pearl Chip Cherrychip Darkchip Tempo | Enterprise Accolade Mirth |



FAST DISBUDS AND FAST SPRAYS

Varieties suitable for this program include not only a number of popular standard types such as the Indianapolis group, but also numerous large flowered pompon, single, decoratives, and anemone types, which, when disbudded to one flower, result in three to four inch blooms, this being the size range that is generally sought for. Stem lengths generally range from 24 to 30 inches.

Why are They Becoming Popular?

First of all, they are distinctively beautiful and versatile in their use. The chrysanthemum, as is known in European floriculture, is devoted exclusively to these intermediate to large disbuds. It is thought that this method of culture partly resulted because the greatest percentage of flowers produced are purchased directly for home use. Thus, they can justifiably be called "Homesize-mums" with great future potential as we on the North American continent look forward to an expansion in our present home markets. The retail designer will use them to the same advantage as he does a carnation or a snapdragon because of their individuality in arrangement, but will favor the disbudded mum because of its rigid durability both in handling and in keeping qualities.

Efficient Croppers and Money Makers for the Producer

The schedule allows for approximately 3 and $\frac{1}{3}$ crops to be produced on a given bench area within a 52-week period which will produce a total of 36 to 40 individual flowers per sq. ft. As markets are both developed and educated to absorb these shorter stemmed disbuds, even greater efficiencies in reducing total crop time will be possible.

How are They Grown?

Spacing—Allowing a minimum of 12 sq. inches for each flowering stem during the higher light periods of the year ranging to a maximum of 15 to 18 sq. inches per stem during the lowest and poorest light periods, has ben found to be sufficiently adequate to produce this crop.

Since this crop is to be pinched, the recommendation is to plant either $4'' \times 6''$ apart and prune each plant to two stems or plant $6'' \times 6''$ and prune each plant to three stems.

Optimum grade uniformity is generally achieved by permitting only two stems to remain on each plant. This procedure is specifically recommended when the large standard types of

mums (Indianapolis, etc.) are to be grown in this fast schedule, whereas many of the intermediate type disbud varieties will readily support three stems per plant. Either method of handling will provide the same total production per given sq. ft. of bench area.



MARKET PACK OF FAST DISBUD

RECOMMENDED SPACING

Summer Flowering 6"x4" Two stems per plant Spring & Fall 6"x5" Two stems per plant Winter Flowering 6"x6" Two stems per plant

Pruning—Selecting the two or three most uniformly vigorous shoots on each pinched plant and removing the remaining or extra breaks should be done at the earliest possible time. If growth is freely active, this pruning operation can be done 10 to 14 days after the pinch. Careless delay in the pruning operation will shorten the height of the crop below that which is normally possible with the given schedule.

Disbudding—Much like the pruning operation. In order to achieve maximum flower development and size, select the one flowering bud, usually the terminal bud, early, whenever the side buds are firm and can be rolled or snapped off easily.

Cultural Pointers—The principles of growing Fast Disbuds as related to soils, planting, fertilizing, temperature, water, insect and disease control, are essentially the same as are recommended and required in the production of a regular scheduled crop of either pompons or standards.

FAST DISBUDS AND FAST SPRAYS

| FLOWER | PLANT | PINCH | LIGHTING PERIOD | START SHADE | RESPONSE GROUP |
|----------------|---------|---------|---|-------------------------------|-----------------------------|
| April 24, 1961 | Jan. 9 | Feb. 6 | Jan. 9 - Feb. 13 Jan. 9 - Feb. 20 Jan. 9 - Feb. 27 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |
| May 1, 1961 | Jan. 16 | Feb. 13 | Jan. 16 - Feb. 20 Jan. 16 - Feb. 27 Jan. 16 - Mar. 6 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |
| May 8, 1961 | Jan. 23 | Feb. 20 | Jan. 24 - Feb. 27 Jan. 24 - Mar. 6 Jan. 24 - Mar. 13 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |
| May 15, 1961 | Jan. 30 | Feb. 20 | Jan. 30 - Mar. 6 Jan. 30 - Mar. 13 Jan. 30 - Mar. 20 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |
| May 22, 1961 | Feb. 13 | Mar. 6 | Feb. 14 - Mar. 13 Feb. 14 - Mar. 20 Feb. 14 - Mar. 27 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |
| May 29, 1961 | Feb. 20 | Mar. 13 | Feb. 21 - Mar. 20 Feb. 21 - Mar. 27 Feb. 21 - Apr. 3 | Mar. 20 Mar. 27 Apr. 3 | 10 Week 9 Week 8 Week |
| June 5, 1961 | Mar. 6 | Mar. 27 | Mar. 6 - Mar. 27 Mar. 6 - Apr. 3 Mar. 6 - Apr. 10 | Mar. 27 Apr. 3 Apr. 10 | 10 Week 9 Week 8 Week |
| June 12, 1961 | Mar. 13 | Apr. 3 | Mar. 13 - Apr. 3 Mar. 13 - Apr. 10 Mar. 13 - Apr. 17 | Apr. 3 Apr. 10 Apr. 17 | 10 Week 9 Week 8 Week |
| June 19, 1961 | Mar. 20 | Apr. 10 | Mar. 20 - Apr. 10 Mar. 20 - Apr. 17 Mar. 20 - Apr. 24 | Apr. 10 Apr. 17 Apr. 24 | 10 Week 9 Week 8 Week |
| June 26, 1961 | Mar. 27 | Apr. 17 | Mar. 27 - Apr. 17 Mar. 27 - Apr. 24 Mar. 27 - May 1 | Apr. 17 Apr. 24 May 1 | 10 Week 9 Week 8 Week |

VARIETIES IN RESPONSE GROUPS

| W | Н | 17 | Έ |
|---|---|----|----|
| W | Н | Į1 | ΓΕ |

YELLOW

BRONZE & RED

PINK

| 10 WEEK | 9 WEEK | 8 WEEK | |
|---|--|-------------------------------|--|
| Ind. White Imp. Ind. White Ind. No. 3 White Iceberg Ensign | Silver Bow Marblehead Donlope's White Spider Queen's Lace | White Pink Chief | |
| Imp. Ind. Yellow Golden Yel. Princess Anne Cream Yel. Princess Anne Explorer Yellow Iceberg | Golden Herald Yellow Bow Luyona Gold Lace Yellow Ivanhoe | Harvest Golden Celestra | |
| Ind. Bronze Dark Ind. Bronze Daybreak Golden Gate Bronze Princess Anne | Dorothy Hyde Sundown Symbol Duchess Fred Yule | Amber Bright Mayford Titan | |
| Ind. Pink Vanguard Southdown Pink Plum Princess Anne Bluebird Rosamund | Blue Ribbon Bunbu Mary Garden Miss America | Pink Chief | |

POT PLANT SCHEDULE



FAST DISBUDS AND FAST SPRAYS

| FLOWER | PLANT | PINCH | LIGHTING PERIOD | START SHADE | RESPONSE GROUP |
|-----------------|---------|---------|--|-------------------------------|-----------------------------|
| July 3, 1961 | Apr. 3 | Apr. 24 | Apr. 3 - Apr. 24 Apr. 3 - May 1 Apr. 3 - May 8 | Apr. 24 May 1 May 8 | 10 Week 9 Week 8 Week |
| July 10, 1961 | Apr. 10 | May 1 | Apr. 10 - May 1 Apr. 10 - May 8 Apr. 10 - May 15 | May 1 May 8 May 15 | 10 Week 9 Week 8 Week |
| July 17, 1961 | Apr. 17 | May 8 | Apr. 17 - May 8 Apr. 17 - May 15 Apr. 17 - May 22 | May 8 May 15 May 22 | 10 Week 9 Week 8 Week |
| July 24, 1961 | Apr. 24 | May 15 | Apr. 24 - May 15 Apr. 24 - May 22 Apr. 24 - May 29 | May 15 May 22 May 29 | 10 Week 9 Week 8 Week |
| July 31, 1961 | May 1 | May 15 | No | May 22 May 29 June 5 | 10 Week 9 Week 8 Week |
| August 7, 1961 | May 8 | May 22 | No | May 29 June 5 June 12 | 10 Week 9 Week 8 Week |
| August 14, 1961 | May 15 | May 29 | No | June 5 June 12 June 19 | 10 Week 9 Week 8 Week |
| August 21, 1961 | May 22 | June 5 | No | June 12 June 19 June 26 | 10 Week 9 Week 8 Week |
| August 27, 1961 | May 29 | June 12 | No | June 19 June 26 July 3 | 10 Week 9 Week 8 Week |

VARIETIES IN RESPONSE GROUPS

| | 10 WEEK | 9 WEEK | 8 WEEK |
|-----------------|--|--|------------------|
| WHITE | Ind. White Imp. Ind. White Ind. No. 3 White Ensign | Silver Bow Marblehead Donlope's White Spider Queen's Lace Themesong White Mary Garden | White Pink Chief |
| YELLOW | Imp. Ind. Yellow Ind. Gold Luxury Golden Yel. Princess Anne Cream Yel. Princess Anne | Golden Herald Yel. Marbiehead Yellow Bow Luyona Gold Lace Yellow Ivanhoe | Celestra |
| BRONZE & RED | Daybreak Golden Gate Bronze Princess Anne | Symbol Sundown Fred Yule | Amber Bright |
| PINK | Vanguard Laughter Bluebird | Bunbu Miss America | |



FAST DISBUDS AND FAST SPRAYS

| FLOWER | PLANT | PINCH | LIGHTING PERIOD | START SHADE | RESPONSE GROUP |
|--------------------|---------|---------|-----------------|-------------------------------|------------------------------|
| September 4, 1961 | June 5 | June 19 | No | June 26 July 3 July 10 | 10 Week 9 Week 8 Week |
| September 11, 1961 | June 12 | June 26 | No | July 3 July 10 July 17 | 10 Week 9 Week 8 Week |
| September 18, 1961 | June 19 | July 3 | No | July 10 July 17 July 24 | 10 Week 9 Week 8 Week |
| September 25, 1961 | June 19 | July 3 | No | July 17 July 24 July 31 | 10 Week 9 Week 8 Week |
| October 2, 1961 | June 26 | July 10 | No | July 24 July 31 Aug. 7 | 10 Week 9 Week 8 Week |
| October 9, 1961 | July 3 | July 17 | No | July 24 July 31 Aug. 7 | 11 Week 10 Week 9 Week |
| October 16, 1961 | July 3 | July 17 | No | July 31 Aug. 7 Aug. 14 | 11 Week 10 Week 9 Week |
| October 23, 1961 | July 10 | July 24 | No | Aug. 7 Aug. 14 Aug. 21 | 11 Week 10 Week 9 Week |

VARIETIES IN RESPONSE GROUPS

| W | Н | IT | Έ |
|---|---|----|---|

YELLOW

BRONZE & RED

PINK

| 11 WEEK | 10 WEEK | 9 WEEK | 8 WEEK |
|-----------------------------------|---|---|----------------------------|
| Ermine John Baumann | Ind. White Imp. Ind. White Ind. No. 3 White Iceberg Ensign | Silver Bow Marblehead Donlope's Wh. Spider Queen's Lace Themesong | White Pink Chie |
| Shane Sultan | Imp. Ind. Yellow Explorer Yellow Iceberg Golden Yel. Princess Anne Cream Yel. Princess Anne | Golden Herald Yellow Bow Luyona Gold Lace Yellow Ivanhoe | Harvest Golden Celestra |
| Valentine Olnura Tan Vedova | Ind. Bronze Dark Ind. Bronze Daybreak Woking Scarlet Golden Gate Bronze Princess Anne | Symbol Fred Yule Ivanhoe Chambrier Duchess | Amber Bright |
| Vedova Venoya Thanks. Pink | Ind. Pink Vanguard Southdown Pink Plum Bluebird Princess Anne Rosamund | Bunbu Mary Garden Miss America | Pink Chief |

POT PLANT SCHEDULE



FAST DISBUDS AND FAST SPRAYS

| FLOWER | PLANT | PINCH | LIGHTING PERIOD | START SHADE | RESPONSE |
|-------------------|---------|----------|--|---------------------|-------------------------------|
| October 30, 1961 | July 17 | July 31 | No No | Aug. 14 No | 11 Week 10 Week |
| November 6, 1961 | July 17 | July 31 | No Aug. 1 - Aug. 28 | Aug. 21 No | 11 Week 10 Week |
| November 13, 1961 | July 24 | Aug. 7 | No No Aug. 1 - Sept. 4 | Aug. 21 No No | 12 Week 11 Week 10 Week |
| November 20, 1961 | July 31 | Aug. 14 | No Aug. 7 - Sept. 4 Aug. 1 - Sept.11 | No No No | 12 Week 11 Week 10 Week |
| November 27, 1961 | Aug. 7 | Aug. 21 | Aug. 14 - Sept. 4 Aug. 7 - Sept. 11 Aug. 7 - Sept. 18 | No No No | 12 Week 11 Week 10 Week |
| December 4, 1961 | Aug. 7 | Aug. 21 | Aug. 14 - Sept. 11 Aug. 7 - Sept. 18 Aug. 7 - Sept. 25 | No No No | 12 Week 11 Week 10 Week |
| December 11, 1961 | Aug. 14 | Sept. 4 | Aug. 14 - Sept. 18 Aug. 14 - Sept. 25 Aug. 14 - Oct. 2 | No No No | 12 Week 11 Week 10 Week |
| December 18, 1961 | Aug. 14 | Sept. 4 | Aug. 14 - Sept.25 Aug. 14 - Oct. 2 Aug. 14 - Oct. 9 | No No No | 12 Week 11 Week 10 Week |
| December 25, 1961 | Aug. 21 | Sept. 11 | Aug. 21 - Oct. 2 Aug. 21 - Oct. 9 Aug. 21 - Oct. 16 | No No No | 12 Week 11 Week 10 Week |

VARIETIES IN RESPONSE GROUPS

| | 12 WEEK | 11 WEEK | 10 WEEK |
|-----------------|--|---------------------------------------|---|
| WHITE | Imp. White Peter John Champ White Valencia December Glory | White Norma Ermine John Baumann | Imp. Ind. White Ind. No. 3 White |
| YELLOW | Yellow Peter John No. 2 Yellow Glory Yellow Valencia | Shane Sultan | Imp. Ind. Yellow Ind. Yellow Nightingale |
| BRONZE & RED | Imp. Bronze Peter John Apricot Valencia Crimson Valencia | Valentine Olnura Tan Vedova | Ind. Bronze Dark Ind. Bronze Woking Scarlet |
| PINK | Pink Peter John Royal Valencia | Vedova Venoya Thanks. Pink | Ind. Pink Southdown Pink Plum Laughter |
| | | | |



FAST DISBUDS AND FAST SPRAYS

| FLOWER | PLANT | PINCH | LIGHTING PERIOD | SHADE | RESPONSE GROUP |
|-------------------|----------|-----------------|---|----------------|-------------------------------|
| January 1, 1962 | Aug. 28 | Sept. 18 | Aug. 28 - Oct. 9 Aug. 28 - Oct. 16 Aug. 28 - Oct. 23 | No No No | 12 Week 11 Week 10 Week |
| January 8, 1962 | Sept. 4 | Sept. 25 | Sept. 4 - Oct. 16 Sept. 4 - Oct. 23 Sept. 4 - Oct. 30 | No No No | 12 Week 11 Week 10 Week |
| January 15, 1962 | Sept. 11 | Oct. 2 | Sept. 11 - Oct. 23 Sept. 11 - Oct. 30 Sept. 11 - Nov. 6 | No No No | 12 Week 11 Week 10 Week |
| January 22, 1962 | Sept. 18 | Oct. 9 | Sept. 18 - Oct. 30 Sept. 18 - Nov. 6 Sept. 18 - Nov. 13 | No No No | 12 Week 11 Week 10 Week |
| January 29, 1962 | Sept. 25 | Oct. 16 | Sept. 25 - Nov. 6 Sept. 25 - Nov. 13 Sept. 25 - Nov. 20 | No No No | 12 Week 11 Week 10 Week |
| February 5, 1962 | Oct. 2 | Oct. 23 | Oct. 2 - Nov. 13 Oct. 2 - Nov. 20 Oct. 2 - Nov. 27 | No No No | 12 Week 11 Week 10 Week |
| February 12, 1962 | Oct. 9 | Oct. 30 | Oct. 9 - Nov. 20 Oct. 9 - Nov. 27 Oct. 9 - Dec. 4 | No No No | 12 Week 11 Week 10 Week |
| February 19, 1962 | Oct. 16 | Nov. 6 | Oct. 16 - Nov. 27 Oct. 16 - Dec. 4 Oct. 16 - Dec. 11 | No No No | 12 Week 11 Week 10 Week |
| February 26, 1962 | Oct. 23 | N ov. 13 | Oct. 23 - Dec. 4 Oct. 23 - Dec. 11 Oct. 23 - Dec. 18 | No No No | 12 Week 11 Week 10 Week |

VARIETIES IN RESPONSE GROUPS

| | 12 WEEK | 11 WEEK | 10 WEEK |
|-----------------|--|---------------------------------------|---|
| WHITE | Imp. White Peter John Champ Illini Glacier | White Norma Ermine John Baumann | Imp. Ind. White Ind. No. 3 White |
| YELLOW | Yellow Peter John No. 2 Yellow Glory | Shane | Ind. Yellow Imp. Ind. Yellow Luyona |
| BRONZE & RED | Imp. Bronze Peter John | Valentine Olnura Tan Vedova | Ind. Bronze Dark Ind. Bronze Woking Scarlet |
| PINK | Pink Peter John Royal | Vedova Venoya Thanks. Pink | Ind. Pink Rosamund Laughter |



FAST DISBUDS AND FAST SPRAYS

| FLOWER | PLANT | PINCH | LIGHTING PERIOD | START SHADE | RESPONSI |
|----------------|---------|---------|--|------------------------------|------------------------------|
| March 5, 1962 | Oct. 30 | Nov. 20 | Oct. 30 - Dec. 18 Oct. 30 - Dec. 25 Oct. 30 - Jan. 1 | No No No | 11 Week 10 Week 9 Week |
| March 12, 1962 | Nov. 6 | Dec. 4 | Nov. 6 - Dec. 25 Nov. 6 - Jan. 1 Nov. 6 - Jan. 8 | No No No | 11 Week 10 Week 9 Week |
| March 19, 1962 | Nov. 13 | Dec. 11 | Nov. 13 - Jan. 1 Nov. 13 - Jan. 8 Nov. 13 - Jan. 15 | No No No | 11 Week 10 Week 9 Week |
| March 26, 1962 | Nov. 27 | Dec. 25 | Nov. 27 - Jan. 8 Nov. 27 - Jan. 15 Nov. 27 - Jan. 22 | No No No | 11 Week 10 Week 9 Week |
| April 2, 1962 | Dec. 4 | Jan. 1 | Dec. 4 - Jan. 22 Dec. 4 - Jan. 29 Dec. 4 - Feb. 5 | No No No | 10 Week 9 Week 8 Week |
| April 9, 1962 | Dec. 18 | Jan. 15 | Dec. 18 - Jan. 29 Dec. 18 - Feb. 5 Dec. 18 - Feb. 12 | No No No | 10 Week 9 Week 8 Week |
| April 16, 1962 | Dec. 25 | Jan. 22 | Dec. 25 - Feb. 5 Dec. 25 - Feb. 12 Dec. 25 - Feb. 19 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| April 23, 1962 | Jan. 8 | Feb. 5 | Jan. 8 - Feb. 12 Jan. 8 - Feb. 19 Jan. 8 - Feb. 26 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |
| April 30, 1962 | Jan. 15 | Feb. 12 | Jan. 15 - Feb. 19 Jan. 15 - Feb. 26 Jan. 15 - Mar. 5 | Mar. 19 Mar. 26 Apr. 2 | 10 Week 9 Week 8 Week |

VARIETIES IN RESPONSE GROUPS

| w | н | TE |
|----|---|----|
| vv | п | |

YELLOW

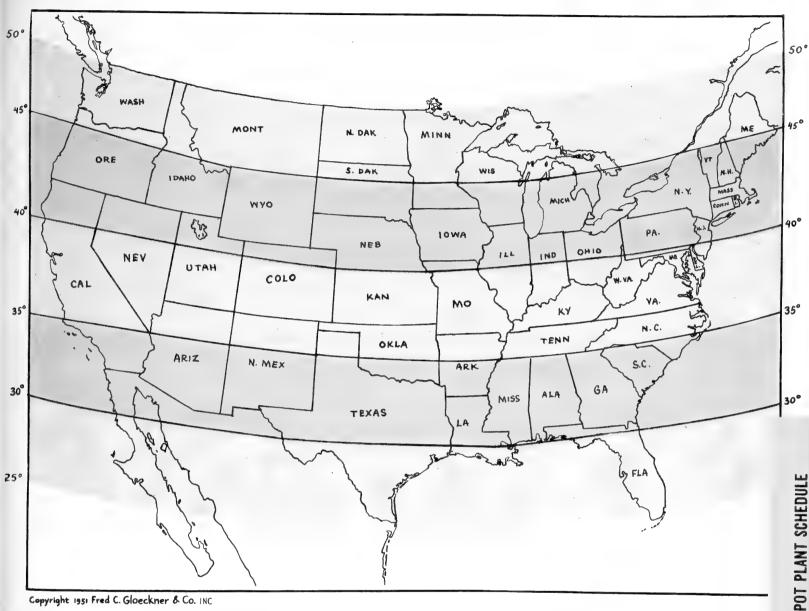
BRONZE & RED

PINK

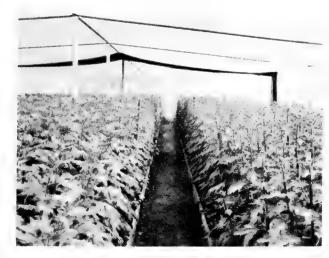
| 11 WEEK | 10 WEEK | 9 WEEK | 8 WEEK |
|---------------------------------------|---|--------------------------------------|-------------------------------|
| White Norma Ermine John Baumann | Ind. White Imp. Ind. White Ind. No. 3 White Iceberg | Donlope's Wh. Spider Queen's Lace | White Pink Chief |
| Shane | Imp. Ind. Yellow Yellow Iceberg Chairman Golden Yel. Princess Anne Cream Yel. Princess Anne | Luyona Gold Lace | |
| Valentine Olnura Tan Vedova | Dark Ind. Bronze Daybreak Woking Scarlet Golden Gate Bronze Princess Anne Apricot Princess Anne | Duchess Chambrier | Amber Brìght Mayford Titan |
| Vedova Venoya | Ind. Pink Southdown Pink Plum Laughter Princess Anne Rosamund | Blue Ribbon Bunbu Dark Ribbon | Pink Chief |



YEAR-ROUND FLOWERING OF CHRYSANTHEMUM



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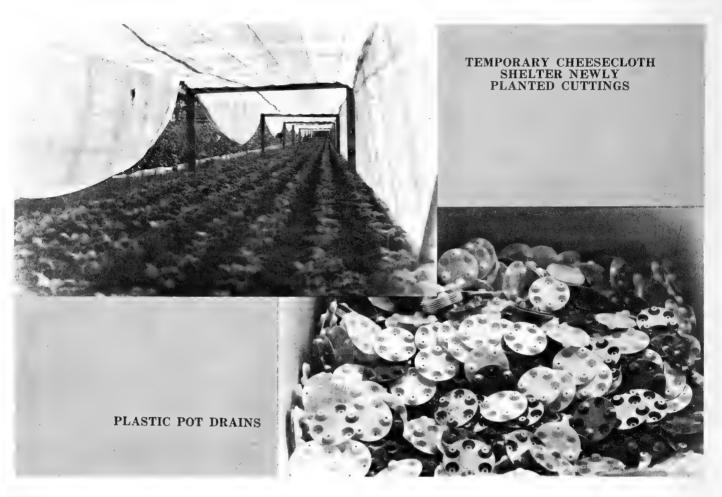


STANDARDS IN SARAN HOUSE PROTECTED WITH POLYETHYLENE AFTER COLOR DEVELOPED



THE MAP ABOVE WILL ASSIST YOU IN LOCATING THE LATI-TUDE IN WHICH YOUR GREEN-HOUSE IS LOCATED. YOU NEED THIS INFORMATION TO USE THE FLOWERING SCHEDULES THAT FOLLOW ON THE NEXT PAGES.





SOIL

A good fibrous silt loam from the field, to which one-third to one-half of well rotted manure or German peat has been added, plus an application of superphosphate or a low nitrogen, complete fertilizer will give excellent results. In areas where such soil is not available a heavier soil may be improved by additions of sand or perlite to the soil. Since perlite holds large quantities of air, and moisture, a little experimentation will usually show the correct mixture. Remember there is no fertilizer program available that can pro-

duce vigorous growth and the desirable dark green luster on the foliage if the soil does not provide sufficient aeration. Some growers are getting quicker root action by using a top dressing of one-half inch of German peat over their regular soil mixture in each pot and planting through this mulch. It saves on watering and assists in producing more breaks after pinching.

In many areas peanut hulls, sawdust or wood shavings are excellent alternate sources of organic matter. With these, additional nitrogen feeding is necessary at the beginning of the crop.

WATERING AND HUMIDITY

Cuttings should always be planted in soil that has been uniformly moistened, either by sterilization or nautral wetting. Some growers prepare pots a day ahead to assure the correct level of moisture in each pot prior to planting. After planting, water thoroughly to set the soil around the roots. The additions of peat and perlite to the original soil will improve water retention and help eliminate extreme fluctuations in moisture supply. Chrysanthemum plants can be overwatered as easily as poinsettia plants. Overwatering results in the death of roots and the yellowing of foliage. The variety of Oregon is used by some growers as an indicator, since it shows these symptoms quickly. In order to assure adequate moisture and humidity prior to pinching and during the lighting period, many growers place cuttings under intermittent mist after potting. This eliminates initial watering and assists in developing more and stronger breaks. With this system no supplemental shading is necessary on young plants.

For best results grow all potted chrysanthemum under glass. Do not shade the glass any more than necessary. Usually a light shade is necessary in midsummer and particularly on plants approaching the finishing stages. Shade on the glass is more for the comfort of the grower, than for the requirements of the plants. Maintain humidity in the house by wetting down benches and walks.



AMPLE SPACE BETWEEN POTS IS NECESSARY

FERTILIZING

The foliage should retain a bright green luster throughout the life of the plants. The lower leaves should never be allowed to become pale green as a result of low fertility. A strong, wellgrown pot plant is a well-fed plant. Pot plants should be fed more frequently than those grown in a bench, as constant leaching lowers the nutrient level in pots faster tha nin bench culture.

Liquid fertilizers are very effective. Constant fertilization by means of injecting small quantities of fertilizer into the water line has eliminated the tendency to fluctuate the quantities of fertilizer available to the plant. Fertilizing every time the plants are watered with a Fert-O-Ject has proved to be a reliable method of maintaining desirable fertility levels. Tests at Ohio State University confirmed this. The most desirable growth was secured when plants were fertilized with 1 ounce of 20-20-20 to 15 gallons of water each time they were watered. With this system young cuttings may be watered-in with the same solution as that used on older, established plants.

When an injection system is not available, regular weekly feedings with liquid fertilizer are recommended. The last fertilizing is as important as the first one. In many cases pot mums not having correct fertility at finishing time lack keeping quality. This is especially true if the pot has not had adequate fertility levels maintained



REMOVING JUST THE GROWING TIP



TEMPERATURE

The optimum night temperature is 65 degrees F. Day temperatures should be 75 to 85 degrees F. when the light intensity is high and 70 degrees F. on cloudy days. Heat delay occurs when night temperatures reach 90 degrees or higher. This condition is similar to the check that results when plants are removed from the short-day treatment too early, when black cloth treatment is missed too often, or when old shading cloth is used.

Some of the delay may be overcome by placing black cloth over the plants with as much headroom as possible to increase air movement under the cloth. Ground beds with cloth placed 6 feet above pots is satisfactory. The only positive method to overcome this heat check is to install air conditioning to lower the temperatures. Where this is not possible, variety selection is extremely important.

Growing the crop at less than 65 degrees F. night temperature results in uneven and delayed flowering. A gradual temperature drop to 55 degrees F. after buds show color is recommended for most colored varieties.

Extreme fluctuation of night temperatures above 65 degrees F., and below 54 degrees F. will retard flowering especially in the later stages of bud development.

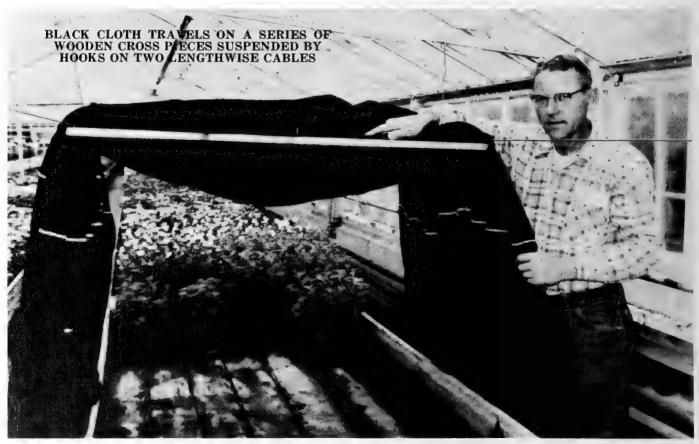
SHADING AND DISBUDDING

Use the same procedure as for cut flowers. Black cloth treatment should continue until disbudding.

The time of disbudding pot mums must be stressed. Late disbudding produces a shock to the plant that can affect flower size, timing and color. Several days delay in disbudding is equal to more than several days delay in flowering during high temperature periods of the year. Generally it is necessary to make two passes at disbudding; the first is made as soon as the terminal bud cluster has opened enough to permit side-bud removal without injury to the terminal bud. The second disbudding removes any lateral shoots that are stimulated into growth after removal of the first set of side buds. The commonly used garden varieties are not disbudded when they are used for Easter and Mothers' Day pots since the flower size is not large enough to make a show, and the beauty lies in the number of flowers contained on the bushy plants.

PLANTING AND PINCHING

Planting only those cuttings directly into the pots which have been graded for height and stem





diameter is the beginning of top quality pots. Uneven growth resulting from differences in cuttings within a pot is not easily corrected in the later stages of growing. Deep planting results in greater susceptibility to Rhizoctonia and Pythium. Uneven planting depths among cuttings within a pot also will produce uneven growth responses within the same pot. It is better to plant cuttings in a circle around the pot rather than the four with one in the center. Planting cuttings on an angle generally increaes the number of breaks that develop from the initial pinch. Failure to achieve the proper number of strong breaks from the first pinch often can be traced to pinching plants which were not vigorously growing at time of that pinch. Frequently the clue to this trouble is the number of plants that require an additional pinch because the first pinch simply removed a portion of the leaf rather than the entire growing tip. If active growth does not occur, and the schedule calls for a pinch, it would be better to delay the pinch, until the plant has made sufficient new growth. The slight delay in flowering time is insignificant compared to the reduction in quality that results from improper pinching.

Hard pinches on actively growing plants often reduces the number of breaks. No more than ½ inch of stem tip should be removed from the plant when pinching, and best results occur when the tip is simply "rolled out." The pinch should be made only on growth that has occurred in your greenhouse. The accompanying photographs illustrate this technique.

The use of intermittent mist on plants in the early stages helps to establish cuttings rapidly, and breaking action is improved.

SINGLE STEM METHOD

Plant 7 or 8 cuttings per 6-inch pot or 10 to 15 cuttings per 8-inch pot making sure they are uniformly graded prior to planting. Do not pinch. This permits a saving of one to three weeks growing time over the pinch method. Disbud to one bud per plant as early as possible. Total growing time is approximately equal to response classification of the variety. One advantage of the single-stem method crop is the increase of one more crop per year over the pinched crop system. Blooms will be very large and the stems will be much stronger than with pinched plants. Varieties recommended for single stem culture are: Malou, Mrs. Wolfe, Princess Anne, Clipper, Loubens, Cossack, Red Star, Vulcan and Perle Angevine.

In the past it has been difficult to control the height on some vigorously growing varieties. A new chemical called Phosphon D which is nontoxic to the plants and is mixed into the potting soil prior to planting has given satisfactory control of height. Phosphon D can control the height of plants of large flowering standard varieties such as Indianapolis when grown single stem. Phosphon D does not affect the size of the flowers but may delay flowering slightly.





SINGLE-PINCH METHOD

Considered the standard method, this system produces a mass of flowers on stocky plants. Plant 5 or 6 rooted cuttings per 6-inch pot. Rollpinch the plants in the soft growth according to the schedule found in the year-round program.

TIMING PINCH AND SHORT DAYS

In most localities the desirable height of the finished pot is between 17 to 20 inches overall. In order to achieve this height it is necessary to vary the pinch in relation to the beginning of short days according to each variety. All varieties are classed by their natural growing habits.

TALL GROWING VARIETIES (varieties naturally flowering on stems 15 inches and over after short days have been applied.)

Treatment: Short days applied 10 to 14 days prior to pinching to reduce height. (Example: Snow Crystal)

MEDIUM GROWING VARIETIES (varieties which naturally flower on stems no longer than 15 inches after short days have been applied.) Treatment: Short days applied the date of pinching to maintain natural height. (Example: Bonnaffon Deluxe)

SHORT GROWING VARIETIES (varieties which naturally flower on stems under 15 inches after short days have been applied.)

Treatment: Short days applied after 7 to 14 long days following pinch have occurred to promote the additional stem growth needed. (Example: Delaware)

The year around schedule in this manual takes the above into consideration so that all plants should finish at approximately the same height. Seasonal variations occur — check with your Gloeckner representative before scheduling your program.

TWO-PINCH METHOD

The most common method a few years ago and still used some for natural bloom, especially where larger plants are wanted. Plant 4 cuttings per 6-inch pots; 5 per 7-inch, or 7 in 8 inch pots. Pinch plants the first time 14 days after planting and wait 21 days and pinch the second time. Short-day treatment should start at the time of the second pinch.

PREMIUM POT MUMS

The trend in recent years toward smaller, less expensive pot mums to move through merchandising channels has resulted in neglecting some

good higher-priced business in many localities. To regain this trade a few growers are now producing heavy, 8 inch pots the year around, using chiefly single-stem Indianapolis varieties. The accompanying illustration shows what can be done with these, in contrast to the usual 6 inch pinched pots. Some retail shops are now regular weekly and holiday buyers, where these choice pots have become a standard, available item.

The economics are as follows: cutting cost per pot of 8" is about three times that of pinched 6", using 15 cuttings instead of 5. However, the selling price has been approximately double, consistently. In the various growing stages a bench will take two thirds as many 8" as 6". Since the 8" single-stem Indianapolis are put under short-day treatment immediately after planting, they are ready to sell in 9 to 10 weeks; this in contrast to 11 to 13 weeks for average 6" pinched pots. No tranquilizers are used, but it is desirable to run somewhat on the dry side in the early stages to prevent damping off of those cuttings planted in the center of the large soil mass in 8" pots.

SOME COMMON ERRORS

1. GROWING UNDER TOO MUCH SHADE OR CROWDING PLANTS. During low light intensity periods of the year a minimum of 1½ square feet per 6-inch pot is required to finish a quality pot. Some larger growing varieties require more space. Crowding results in spindlier plants, increased susceptibility to foliage and flower diseases, reduction in keeping quality, and yellowing and loss of lower foliage. Often these plants must be staked before they can be transported to the market.



FOR THE "CARRIAGE TRADE"
SINGLE STEM INDIANAPOLIS
8" POTS (RIGHT) CONTRASTED WITH
6" PINCHED OREGON

Excessive shading from dirty glass or too much shading compound will produce similar results. Crowding or excessive shading produces a carbohydrate-deficient plant. DON'T CROWD POT MUMS!

plunged and for that reason the bench on which plunging is being done should have excellent drainage.

2. Loss of Root System:

The early loss of roots often casues a severe check resulting in the production of sub-standard pot mums. Frequently the check is not uniform within a pot causing the pot to be noticeably uneven. This is especially true if the loss is caused by excess fertilizer applications.

(a) By Excess Fertilizers

When excessively high soluable salt concentrations build up in the pots, both leaves and roots can be injured. Leaf margin burning is an expression of this damage.

Next to crowding, more pots are reduced in quality from excess fertilizer applications than any other cause.

(b) By overwatering

Overwatering usually resulting from lack of proper drainage can cause loss of roots. Plunged pots are more easily overwatered than non-

3. Failure to disbud promptly:

Varieties differ in their response to late disbudding but generally the results are late flowering, color loss, and in some cases, ragged foliage resulting from injury incurred during disbudding procedure. Late disbudding on single-stem crops can contribute to undesirable height of finished plants and marked reductions in flower size and color.

4. Root pruning resulting in loss of keeping quality:

This type of injury most often occurs where plants are grown plunged until flowering and have not been turned regularly to maintain a root system within the pot. Plants that have been root-pruned are not able to maintain proper internal moisture relationship even when soil is wet. Frequently the buyer of such plants will complain of short life and the necessity of watering too often. Root-pruned plants will become nitrogen deficient very rapidly which also contributes to the lowering of general appearance and keeping quality of the pot.





Garden Mum Pot Plants for Mother's Day

Garden mum plants in full bloom make ideal potted plants for Mother's Day. This should be a valuable addition to the list of spring pot plants. For best results, 5 cuttings should be planted in a 6-inch pot or 2 cuttings in a 4-inch pot. After these pot plants are through flowering, they should be cut back to within 3 inches of the soil

level and planted into the garden. These same plants will bloom again in the fall.

Many growers have greatly increased their sale of garden chrysanthemums by having collections in bloom during the spring season. Cuttings are planted one to a 3-inch or $3\frac{1}{2}$ -inch pot using the procedure outlined below for Single-Pinch Method.

SINGLE - PINCH METHOD'

| | | BLOOM | PLANT | LIGHTING PERIOD | PINCH | SHADE |
|-------------------|------------------|----------|---------|-------------------|---------|--------|
| EASTER | _{{1961} | APRIL 2 | JAN. 9 | JAN. 9 - JAN. 19 | JAN. 19 | NO |
| LASIER | 1962 | APRIL 22 | FEB. 5 | FEB. 5 - FEB. 19 | FEB. 19 | NO |
| | [1961 | MAY 14 | FEB. 27 | FEB. 27 - MAR. 13 | MAR. 13 | APR. 3 |
| MOTHER'S | 1961* | MAY 14 | MAR. 6 | NO | MAR. 20 | NO |
| DAY | 1962 | MAY 13 | FEB. 26 | FEB. 26 - MAR. 12 | MAR. 12 | APR. 2 |
| | 1962* | MAY 13 | MAR. 5 | NO | MAR. 19 | NO |
| | [1961 | MAY 30 | MAR. 13 | MAR. 13 - MAR. 27 | MAR. 27 | APR. 3 |
| DECORATION DAY | 1961* | MAY 30 | MAR. 20 | NO | MAR. 27 | NO |
| | 1962 | • MAY 30 | MAR. 12 | MAR. 12 - MAR. 26 | MAR. 26 | APR. 2 |
| | 1962* | MAY 30 | MAR. 19 | NO | MAR. 26 | NO |

⁺ For double-pinch method plant five weeks earlier and give first pinch seven days after planting. The second pinch should be made on the pinch date given in the single-pinch method. Be sure to light from the date of planting until date of second pinch.

VARIETIES:

WHITE

DIAMOND
CHRIS COLUMBUS
OSTOSA
LARRY
JESSAMINE WILLIAMS
JOAN-ETTE

YELLOW

YELLOW CHRIS COLUMBUS ASTORIA KINGS RANSOM YELLOW SPOON GAY BLADE ETHEL WATERS

BRONZE & RED

DOLLI-ETTE
TORONTO
LIPSTICK
RADIANCE
MINNIHAHA

MESABI ANN LAJYGO
RED MISCHIEF SPELLBOUND
CHEYENNE MISCHIEF
CAPRICE JOYBRINGER
ZEST ALERT

PINK

ANN LAJYGO
SPELLBOUND
MISCHIEF
JOYBRINGER
ALERT
FUCHSIA FAIRY
RASPBERRY ICE
MINNPINK
PURPLE WATERS
CECELIA
ROYAL-ETTE

#2 FUCHSIA FAIRY

^{*}No light no shade method.

| | IN NOOND | 10112 | ANT SCHE | DOLE | |
|------------------|--|---------------------------------------|-------------------|---------|---------|
| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
| Bloom Apr. 10 | Bonnaffon Deluxe S Clipper Charm | Jan. 2 | Jan. 2 - Jan. 23 | Jan. 23 | Mar. 13 |
| | S Oregon Yellow Delaware Delaware Mermaid | Jan. 2 | Jan. 2 - Jan. 30 | Jan. 23 | Mar. 20 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Humdinger | Jan. 9 | Jan. 9 - Jan. 30 | Jan. 30 | Mar. 20 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Jan. 9 | Jan. 9 - Feb. 6 | Jan. 30 | No |
| | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Princess Anne S Princess Anne | Jan. 16 | Jan. 16 - Jan. 30 | Feb. 6 | Mar. 20 |
| | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Jan. 16 | Jan. 16 - Feb. 6 | Feb. 6 | No |
| 1961 | Bridesmaid | Jan. 23 | Jan. 23 - Feb. 6 | Feb. 13 | No |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Jan. 23 | Jan. 23 - Feb. 13 | Feb. 13 | No |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Jan. 30 | Jan. 30 - Feb. 20 | Feb. 20 | No |

S — For Single Stem Pots — Plant and Shade on Pinch Dates



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|---------|--|---------------------------------------|-------------------|---------|---------|
| | Bonnaffon Deluxe S Clipper Charm | Jan. 9 | Jan. 9 - Jan. 30 | Jan. 30 | Mar. 13 |
| | S Oregon Yellow Delaware Delaware Mermaid | Jan. 9 | Jan. 9 - Feb. 6 | Jan. 30 | Mar. 20 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Humdinger | Jan. 16 | Jan. 16 - Feb. 6 | Feb. 6 | Mar. 20 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Jan. 16 | Jan. 16 - Feb. 13 | Feb. 6 | Mar. 27 |
| Bloom | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Golden Crystal Gold Lace S Golden Yel. Princess Ann S Cream Yel. Princess Ann S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Princess Anne S Pink Deluxe | e Jan. 23 | Jan. 23 - Feb. 6 | Feb. 13 | Mar. 20 |
| Apr. 17 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Jan. 23 | Jan. 23 - Feb. 13 | Feb. 13 | Mar. 27 |
| 1961 | Bridesmaid | Jan. 30 | Jan. 30 - Feb. 13 | Feb. 20 | Mar. 27 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Feb. 6 | Feb. 6 - Feb. 20 | Feb. 20 | No |
| | Ostosa Larry Chris, Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Feb. 13 | Feb. 13 - Feb. 27 | Feb. 27 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|------------------|--|---------------------------------------|-------------------|---------|---------|
| | Bonnaffon Deluxe S Clipper Charm | Jan. 16 | Jan. 16 - Feb. 6 | Feb. 6 | Mar. 13 |
| | S Oregon Yellow Delaware Delaware Mermaid | Jan. 16 | Jan. 16 - Feb. 13 | Feb. 6 | Mar. 20 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Humdinger | Jan. 23 | Jan. 23 - Feb. 13 | Feb. 13 | Mar. 20 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Jan. 23 | Jan. 30 - Feb. 20 | Feb. 13 | Mar. 27 |
| Bloom Apr. 24 | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Princess Anne S Princess Anne | Jan. 30 | Jan. 30 - Feb. 13 | Feb. 20 | Mar. 20 |
| | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Feb. 6 | Feb. 6 - Feb. 20 | Feb. 20 | Mar. 27 |
| 1961 | Bridesmaid | Feb. 13 | Feb. 13 - Feb. 20 | Feb. 27 | Mar. 27 |
| 1901 | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Feb. 13 | Feb. 13 - Feb. 27 | Feb. 27 | Apr. 3 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Feb. 20 | Feb. 20 - Mar. 15 | Mar. 6 | Apr. 10 |

1961



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|----------------|--|---------------------------------------|-------------------|---------|---------|
| | S Clipper Charm | Jan. 23 | Jan. 23 - Feb. 13 | Feb. 13 | Mar. 13 |
| | S Oregon Yellow Delaware Delaware Mermaid | Jan. 23 | Jan. 23 - Feb. 20 | Feb. 13 | Mar. 20 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Humdinger | Jan. 30 | Jan. 30 - Feb. 20 | Feb. 20 | Mar. 20 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Feb. 6 | Feb. 6 - Feb. 27 | Feb. 20 | Mar. 27 |
| Diagra | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Princess Anne S Princess Anne | Feb. 6 | Feb. 6 - Feb. 20 | Feb. 27 | Mar. 20 |
| Bloom May 1 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Feb. 13 | Feb. 13 - Feb. 27 | Feb. 27 | Mar. 27 |
| 1961 | Bridesmaid | Feb. 20 | Feb. 20 - Feb. 27 | Mar. 6 | Mar. 27 |
| 1301 | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Feb. 20 | Feb. 20 - Mar. 6 | Mar. 6 | Apr. 3 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Feb. 27 | Feb. 27 - Mar. 13 | Mar. 13 | Apr. 10 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|---------------|--|---------------------------------------|-------------------|---------|---------|
| | Bonnaffon Deluxe Charm Blue Ridge | Jan. 30 | Jan. 30 - Feb. 20 | Feb. 20 | Mar. 13 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Jan. 30 | Jan. 30 - Feb. 27 | Feb. 20 | Mar. 20 |
| | Chalk Cliff Whiterion Jackstraw Scepter S Red Star Red Humdinger Criterion Personality Humdinger Caress | Feb. 13 | Feb. 13 - Feb. 27 | Feb. 27 | Mar. 20 |
| | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Golden Crystal S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe Gold Lace S Golden Gate S Br. Princess Anne S Princess Anne S Princess Anne | Feb. 20 | Feb. 20 - Feb. 27 | Mar. 6 | Mar. 20 |
| Bloom | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Feb. 13 | Feb. 13 - Mar. 6 | Feb. 27 | Mar. 27 |
| May 8 1961 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon | Feb. 20 | Feb. 20 - Mar. 6 | Mar. 6 | Mar. 27 |
| 1901 | S Perle Angevine Bridesmaid | Feb. 27 | Feb. 27 - Mar. 6 | Mar. 13 | Mar. 27 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Feb. 27 | Feb. 27 - Mar. 13 | Mar. 13 | Apr. 3 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Mar. 6 | Mar. 6 - Mar. 20 | Mar. 20 | Apr. 10 |

VARIETY DESCRIPTION



| >-714 | 1 | | • | | |
|--|--|---------------------------------------|-------------------|---------|---------|
| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
| \$6000 miles (1880) miles (1880 | Bonnaffon Deluxe Charm Blue Ridge | Feb. 13 | Feb. 13 - Feb. 27 | Feb. 27 | Mar. 13 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Feb. 13 | Feb. 13 - Mar. 6 | Feb. 27 | Mar. 20 |
| | Chalk Cliff Whiterion Jackstraw Scepter S Red Star Red Humdinger Criterion Personality Humdinger Caress | Feb. 20 | Feb. 20 - Mar. 6 | Mar. 6 | Mar. 20 |
| | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Golden Crystal S Golden Yel, Princess Anne S Cream Yel, Princess Anne S Yellow Deluxe Gold Lace S Golden Gate S Br. Princess Anne S Princess Anne S Princess Anne S Pink Deluxe | Feb. 27 | Feb. 27 - Mar. 6 | Mar. 13 | Mar. 20 |
| Bloom | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Feb. 20 | Feb. 20 - Mar. 13 | Mar. 6 | Mar. 26 |
| May 15 1961 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | Feb. 27 | Feb. 27 - Mar. 13 | Mar. 13 | Mar. 27 |
| | Bridesmaid | Mar. 6 | Mar. 6 - Mar. 13 | Mar. 20 | Mar. 27 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Mar. 6 | Mar. 6 - Mar. 20 | Mar. 20 | Apr. 3 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Mar. 13 | Mar. 13 - Mar. 27 | Mar. 27 | Apr. 10 |



| | | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-------|------------|---|---------------------------------------|-------------------|---------|---------|
| | | Bonnaffon Deluxe Charm Blue Ridge | Feb. 20 | Feb. 20 - Mar. 6 | Mar. 6 | Mar. 13 |
| | S | Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Feb. 20 | Feb. 20 - Mar. 13 | Mar. 6 | Mar. 20 |
| S | S | Chalk Cliff Whiterion Jackstraw Scepter Red Star Red Humdinger Criterion Personality Humdinger Caress | Feb. 27 | Feb. 27 - Mar. 13 | Mar. 13 | Mar. 20 |
| | 8 888 8888 | Ind. Varieties Ice Follies Snow Crystal Queen's Lace Golden Crystal Golden Yel. Princess Anne Cream Yel. Princess Anne Yellow Deluxe Gold Lace Golden Gate Br. Princess Anne Princess Anne Princess Anne | Mar. 6 | Mar. 6 - Mar. 13 | Mar. 20 | Mar. 20 |
| | SSS | Granite State Wilson's White Malou Dark Wilson's Yellow | Feb. 27 | Feb. 27 - Mar. 20 | Mar. 13 | Mar. 27 |
| 2 | S | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Perle Angevine | Mar. 6 | Mar. 6 - Mar. 20 | Mar. 20 | Mar. 27 |
| 14.44 | | Bridesmaid | Mar. 13 | Mar. 13 - Mar. 20 | Mar. 27 | Mar. 27 |
| | | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Mar. 13 | Mar. 13 - Mar. 27 | Mar. 27 | Apr. 3 |
| | | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Ceccelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Mar. 20 | Mar. 20 - Apr. 3 | Apr. 3 | Apr. 10 |

Bloom May 22 1961

VARIETY DESCRIPTION



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|--------|--|---------------------------------------|-------------------|---------|---------|
| | Bonnaffon Deluxe Charm Blue Ridge | Feb. 27 | Feb. 27 - Mar. 13 | Mar. 13 | Mar. 13 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Feb. 27 | Feb. 27 - Mar. 20 | Mar. 13 | Mar. 20 |
| | Chalk Cliff Whiterion Jackstraw Scepter S Red Star Red Humdinger Criterion Personality Humdinger Caress | Mar. 6 | Mar. 6 - Mar. 20 | Mar. 20 | Mar. 20 |
| | S Ind. Varieties Snow Crystal Queen's Lace Golden Crystal S Golden Crystal Cream Yel. Princess Anne S Yellow Deluxe Gold Lace S Golden Gate S Br. Princess Anne S Princess Anne S Princess Anne | Mar. 13 | Mar. 13 - Mar. 20 | Mar. 27 | Mar, 20 |
| Bloom | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Mar. 6 | Mar. 6 - Mar. 27 | Mar. 20 | Mar. 27 |
| May 29 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | Mar. 13 | Mar. 13 - Mar. 27 | Mar. 27 | Mar. 27 |
| 1961 | Bridesmaid | Mar. 20 | Mar. 20 - Mar. 27 | Apr. 3 | Mar. 27 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Mar. 20 | Mar. 20 - Apr. 3 | Apr. 3 | Apr. 3 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Mar. 27 | Mar. 27 - Apr. 10 | Apr. 10 | Apr. 10 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|------------------|--|---------------------------------------|-------------------|---------|---------|
| | Bonnaffon Deluxe | Mar. 6 | Mar. 6 - Mar. 20 | Mar. 20 | Mar. 20 |
| | S Oregon Yellow Delaware Delaware Mermaid | Mar. 6 | Mar. 6 - Mar. 27 | Mar. 20 | Mar. 27 |
| Bloom | Chalk Cliff Whiterion Jackstraw Scepter S Red Star Criterion Caress Personality Humdinger | Mar. 13 | Mar. 13 - Mar. 27 | Mar. 27 | Mar. 27 |
| June 5 | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Mar. 13 | Mar. 13 - Apr. 3 | Mar. 27 | Apr. 3 |
| 1961 | Ind. Varieties Snow Crystal Queen's Lace Golden Crystal S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe Gold Lace S Golden Gate S Br. Princess Anne S Princess Anne | Mar. 20 | Mar. 20 - Mar. 27 | Apr. 3 | Mar. 27 |
| | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | Mar. 20 | Mar. 20 - Apr. 3 | Apr. 3 | Apr. 3 |
| | Bridesmaid | Mar. 27 | Mar. 27 - Apr. 3 | Apr. 10 | Apr. 3 |
| | Bonnaffon Deluxe | Mar. 13 | Mar. 13 - Mar. 27 | Mar. 27 | Mar. 27 |
| | S Oregon Yellow Delaware Delaware Mermaid | Mar. 13 | Mar. 13 - Apr. 3 | Mar. 27 | Apr. 3 |
| Dlaam | Chalk Cliff Whiterion Jackstraw Scepter Red Star Criterion Caress Personality Humdinger | Mar. 20 | Mar. 20 - Apr. 3 | Apr. 3 | Apr. 3 |
| Bloom June 12 | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Mar. 27 | Mar. 27 - Apr. 10 | Apr. 10 | Apr. 10 |
| 1961 | Ind. Varieties Snow Crystal Queen's Lace Golden Crystal S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe Gold Lace S Golden Gate S Br. Princess Anne S Princess Anne | Mar. 27 | Mar. 27 - Apr. 3 | Apr. 10 | Apr. 3 |
| | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | Apr. 3 | Apr. 3 - Apr. 10 | Apr. 17 | Apr. 10 |
| | Bridesmaid | Apr. 10 | No | Apr. 24 | Apr. 10 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-----------------|--|---------------------------------------|-------------------|---------|---------|
| | Bonnaffon Deluxe | Mar. 27 | Mar. 27 - Apr. 3 | Apr. 10 | Apr. 3 |
| | S Oregon Yellow Delaware Delaware Mermaid | Mar. 27 | Mar. 27 - Apr. 10 | Apr. 10 | Apr. 10 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress Personality | Apr. 3 | Apr. 3 - Apr. 10 | Apr. 17 | Apr. 10 |
| June 19 1961 | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Apr. 3 | Apr. 3 - Apr. 17 | Apr. 17 | Apr. 17 |
| | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | Apr. 10 | No | Apr. 24 | Apr. 10 |
| | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | Apr. 10 | Apr. 10 - Apr. 17 | Apr. 24 | Apr. 17 |
| | Bridesmaid | Apr. 17 | No | May 1 | Apr. 17 |
| | Bonnaffon Deluxe | Apr. 3 | Apr. 3 - Apr. 10 | Apr. 17 | Apr. 10 |
| | S Oregon Yellow Delaware Delaware Mermaid | Apr. 3 | Apr. 3 - Apr. 17 | Apr. 17 | Apr. 17 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress Personality | Apr. 10 | Apr. 10 - Apr. 17 | Apr. 24 | Apr. 17 |
| June 26 | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Apr. 10 | Apr. 10 - Apr. 24 | Apr. 24 | Apr. 24 |
| 1961 | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | Apr. 17 | No | May 1 | Apr. 17 |
| | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | A pr. 17 | Apr. 17 - Apr. 24 | May 1 | Apr. 24 |
| | | 1 | | 1 | |

| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|----------------|--|---------------------------------------|-------------------|---------|---------|
| | Bonnaffon Deluxe | Apr. 10 | Apr. 10 - Apr. 17 | Apr. 24 | Apr. 17 |
| | S Oregon Yellow Delaware Delaware Mermaid | Apr. 10 | Apr. 10 - Apr. 24 | Apr. 24 | Apr. 24 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | A pr. 17 | Apr. 17 - Apr. 24 | May 1 | Apr. 24 |
| July 3 1961 | S Wilson's White S Malou S Dark Wilson's Yellow | Apr. 17 | Apr. 17 - May 1 | May 1 | May 1 |
| | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | Apr. 24 | No | May 8 | Apr. 24 |
| | Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | Apr. 24 | Apr. 24 - May 1 | May 8 | May 1 |
| | Bridesmaid | May 1 | No | May 15 | May 1 |
| | Bonnaffon Deluxe | Apr. 17 | Apr. 17 - Apr. 24 | May 1 | Apr. 24 |
| | S Oregon Yellow Delaware Delaware Mermaid | Apr. 17 | Apr. 17 - May 1 | May 1 | May 1 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | Apr. 24 | Apr. 24 - May 1 | May 8 | May 1 |
| July 10 | S Wilson's White S Malou S Dark Wilson's Yellow | Apr. 24 | Apr. 24 - May 8 | May 8 | May 8 |
| 1961 | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | May 1 | No | May 15 | May 1 |
| | Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | May 1 | May 1 - May 8 | May 15 | May 8 |
| | | | | | |

VARIETY DESCRIPTION



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-----------------|--|---------------------------------------|-----------------|--------|--------|
| | Bonnaffon Deluxe | Apr. 24 | Apr. 24 - May 1 | May 8 | May 1 |
| | S Oregon Yellow Delaware Delaware Mermaid | Apr. 24 | Apr. 24 - May 8 | May 8 | May 8 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | May 1 | May 1 - May 8 | May 15 | May 8 |
| July 17 1961 | S Wilson's White S Malou S Dark Wilson's Yellow | May 1 | May 1 - May 15 | May 15 | May 1 |
| | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | May 8 | No | May 22 | May 8 |
| | Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | May 8 | May 8 - May 15 | May 22 | May 15 |
| | Bridesmaid | May 15 | No | May 29 | May 1 |
| | Bonnaffon Deluxe | May 1 | May 1 - May 8 | May 15 | May 8 |
| | S Oregon Yellow Delaware Delaware Mermaid | May 1 | May 1 - May 15 | May 15 | May 1 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | May 8 | May 8 - May 15 | May 22 | May 1 |
| July 24 | S Wilson's White S Malou S Dark Wilson's Yellow | May 8 | May 8 - May 22 | May 22 | May 2 |
| 1961 | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | May 15 | No | May 29 | May 1 |
| | Quicksilver Snowclad Luna Sundial | May 15 | May 15 - May 22 | May 29 | May 2 |
| | Dark Ribbon S Perle Angevine | | | | |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | PINCH | SHADE |
|-----------------|--|---------------------------------------|---------|--------|
| | Bonnaffon Deluxe | May 8 | May 22 | May 15 |
| | S Oregon Yellow Delaware Delaware Mermaid | May 8 | May 22 | May 22 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | May 15 | May 29 | May 22 |
| July 31 1961 | S Wilson's White S Malou S Dark Wilson's Yellow | May 15 | May 29 | May 29 |
| 1001 | Snow Crystal Queen's Lace Golden Crystal Gold Lace 5 Yellow Deluxe | May 22 | June 5 | May 22 |
| | Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | May 22 | June 5 | May 29 |
| | Bridesmaid | May 29 | June 12 | May 29 |
| | Bonnaffon Deluxe | May 15 | May 29 | May 22 |
| | S Oregon Yellow Delaware Delaware Mermaid | May 15 | May 29 | May 29 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | May 22 | June 5 | May 29 |
| Aug. 7 | S Wilson's White S Malou S Dark Wilson's Yellow | May 22 | June 5 | June 5 |
| 1961 | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | May 29 | June 12 | May 29 |
| | Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | May 29 | June 12 | June 5 |
| | | | | |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | PINCH | SHADE |
|-----------------|--|---------------------------------------|---------|-----------|
| | Bonnaffon Deluxe | May 22 | June 5 | May 29 |
| .0 | S Oregon Yellow Delaware Delaware Mermaid | May 22 | June 5 | June 5 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | May 29 | June 12 | June 5 |
| Aug. 14 1961 | S Wilson's White S Malou S Dark Wilson's Yellow | May 29 | June 12 | June 12 |
| | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | June 5 | June 19 | June 5 |
| | Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | June 5 | June 19 | June 12 ° |
| | Bridesmaid | June 12 | June 26 | June 12 |
| | Bonnaffon Deluxe | May 29 | June 12 | June 5 |
| | S Oregon Yellow Delaware Delaware Mermaid | May 29 | June 12 | June 12 |
| Bloom : | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | June 5 | June 19 | June 12 |
| Aug. 21 | S Wilson's White S Malou S Dark Wilson's Yellow | June 5 | June 19 | June 19 |
| 1961 | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | June 12 | June 26 | June 12 |
| | Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | June 12 | June 26 | June 19 |
| | Bridesmaid | June 19 | July 3 | June 19 |



| 2000000 | | | | |
|-----------------|--|---------------------------------------|---------|---------|
| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | PINCH | SHADE |
| | Bonnaffon Deluxe | June 5 | June 19 | June 12 |
| | S Oregon Yellow Delaware Delaware Mermaid | June 5 | June 19 | June 19 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | June 12 | June 26 | June 19 |
| Aug. 28 1961 | S Wilson's White S Malou S Dark Wilson's Yellow | June 12 | June 26 | June 26 |
| | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | June 19 | July 3 | June 19 |
| | Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | June 19 | July 3 | June 26 |
| | Bridesmaid | June 26 | July 10 | June 26 |
| | Bonnaffon Deluxe | June 12 | June 26 | June 19 |
| | S Oregon Yellow Delaware Delaware Mermaid | June 12 | June 26 | June 26 |
| Bloom | Whiterion Jackstraw Luminary Scepter S Red Star Criterion Caress | June 19 | July 3 | June 26 |
| Sept. 4 | S Wilson's White S Malou S Dark Wilson's Yellow | June 19 | July 3 | July 3 |
| 1961 | Snow Crystal Queen's Lace Golden Crystal Gold Lace S Yellow Deluxe | June 26 | July 10 | June 26 |
| | Quicksilver Snowclad Luna Sundial Dark Ribbon S Perle Angevine | June 26 | July 10 | July 3 |
| | Bridesmaid | July 3 | July 17 | July 3 |



| Bloom Sept. 11 1961 | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | PINCH | SHADE |
|---------------------------|--|---------------------------------------|---------|---------|
| | Bonaffon Deluxe Achievement | June 19 | July 3 | June 26 |
| | Splurge S Harmony | June 26 | July 10 | June 26 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | June 19 | July 3 | July 3 |
| | Whiterion Luminary Jackstraw Scepter S Red Star Criterion Caress Personality Humdinger | June 26 | July 10 | July 3 |
| | S Wilson's White S Malou S Dark Wilson's Yellow | June 26 | July 10 | July 10 |
| | Starburst Snow Crystal Queen's Lace Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Princess Anne | July 3 | July 17 | July 3 |
| | Quicksilver Snowclad Luna Sundial S Perle Angevine Dark Ribbon | July 3 | July 17 | July 10 |
| | Royal Bronze Bridesmaid | July 10 | July 24 | July 10 |
| Bloom | Bonnaffon Deluxe Achievement | June 26 | July 10 | July 3 |
| | Splurge S Harmony | July 3 | July 17 | July 17 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | June 26 | July 10 | July 10 |
| | Whiterion Luminary Jackstraw Scepter S Red Star Criterion Caress Personality Humdinger | July 3 | July 17 | July 10 |
| Sept. 18 | | July 3 | July 17 | July 17 |
| 1961 | Starburst Snow Crystal Queen's Lace Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Princess Anne | July 10 | July 24 | July 10 |
| | Quicksilver Snowclad Luna Sundial S Perle Angevine Dark Ribbon | July 10 | July 24 | July 17 |
| | Royal Bronze Bridesmaid | July 17 | July 31 | July 17 |





| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | PINCH | SHADE |
|-------------------|--|---------------------------------------|---------|---------|
| | Bonaffon Deluxe Achievement | July 3 | July 17 | July 10 |
| | S Harmony | July 10 | July 24 | July 10 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | July 3 | July 17 | July 17 |
| Bloom Sept. 25 | Whiterion Luminary Jackstraw Scepter S Red Star Criterion Caress Personality Humdinger | July 10 | July 24 | July 17 |
| 1961 | S Malou S Dark Wilson's Yellow | July 10 | July 24 | July 24 |
| 1301 | Starburst Snow Crystal Queen's Lace Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Princess Anne | July 17 | July 31 | July 17 |
| | Quicksilver Snowclad Luna Sundial S Perle Angevine Dark Ribbon | July 17 | July 31 | July 24 |
| | Royal Bronze Bridesmaid | July 24 | Aug. 7 | July 24 |
| | Bonnaffon Deluxe Achievement | July 10 | July 24 | July 17 |
| | Splurge S Harmony | July 17 | July 31 | July 17 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | July 10 | July 24 | July 24 |
| Bloom | Whiterion Luminary Jackstraw Scepter S Red Star Criterion Caress Personality Humdinger | July 17 | July 31 | July 24 |
| Oct. 2 | S Wilson's White S Malou S Dark Wilson's Yellow | July 17 | July 31 | July 31 |
| 1961 | Starburst Snow Crystal Queen's Lace Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne Yellow Deluxe S Golden Gate S Bronze Princess Anne Princess Anne | July 24 | Aug. 7 | July 24 |
| | Quicksilver Snowclad Luna Sundial S Perle Angevine Dark Ribbon | July 24 | Aug. 7 | July 31 |
| | Royal Bronze Bridesmaid | July 31 | Aug. 14 | July 31 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|----------------|---|---------------------------------------|------------------|---------|---------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | July 17 | No | July 31 | July 24 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | July 17 | No | July 31 | July 31 |
| | Splurge S Harmony S Valentine Vedova Venoya Heather Blue Ridge | July 24 | No | Aug. 7 | July 24 |
| Bloom | Whiterion Chalk Cliff Luminary Scepter S Red Star Criterion Personality Humdinger Caress | July 24 | No | Aug. 7 | July 31 |
| 0ct. 9 1961 | S Wilson's White S Poitevine Supreme S Malou S Dark Wilson's Yellow | July 24 | July 31 - Aug. 7 | Aug. 7 | Aug. 7 |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Snow Crystal S Ind. Varieties Gold Lace Golden Crystal S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Yellow Deluxe S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | July 31 | No | Aug. 14 | July 31 |
| | Monty Luna Quicksilver Snowclad Sundial Resolute Dark Ribbon S Perle Angevine | July 31 | July 31 - Aug. 7 | Aug. 14 | Aug. 7 |
| | Royal Bronze Bridesmaid | Aug. 7 | No | Aug. 21 | Aug. 7 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-----------------|--|---------------------------------------|-------------------|---------|---------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | July 24 | No | Aug. 7 | July 31 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | July 24 | July 31 - Aug. 7 | Aug. 7 | Aug. 7 |
| | Splurge S Harmony S Valentine Vedova Venoya Heather Blue Ridge | July 31 | No | Aug. 14 | July 31 |
| Bloom | Whiterion Chalk Cliff Luminary Scepter S Red Star Criterion Personality Humdinger Caress | July 31 | July 31 - Aug. 7 | Aug. 14 | Aug. 7 |
| Oct. 16 1961 | S Wilson's White S Poitevine Supreme S Malou S Dark Wilson's Yellow | July 24 | July 24 - Aug. 14 | Aug. 7 | Aug. 14 |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Snow Crystal S Ind. Varieties Gold Lace Golden Crystal S Golden Yel, Princess Anne S Cream Yel. Princess Anne S Golden Gate S Yellow Deluxe S Bronze Princess Anne S Apricot Princess Anne S Princess Anne Pink Deluxe | Aug. 7 | No | Aug. 21 | Aug. 7 |
| | Monty Luna Quicksilver Snowclad Sundial Resolute Dark Ribbon S Perle Angevine | July 31 | July 31 - Aug. 14 | Aug. 14 | Aug. 14 |
| | Royal Bronze Bridesmaid | Aug. 7 | Aug. 7 - Aug. 14 | Aug. 24 | Aug. 14 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-----------------|--|---------------------------------------|-------------------|---------|---------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | July 31 | No | Aug. 14 | Aug. 7 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | July 24 | July 24 - Aug. 14 | Aug, 7 | Aug. 14 |
| | Splurge S Harmony S Valentine Vedova Venoya Heather Blue Ridge | Aug. 7 | No | Aug. 21 | Aug. 7 |
| Bloom | Whiterion Chalk Cliff Luminary Scepter S Red Star Criterion Personality Humdinger Caress | July 31 | July 31 - Aug. 14 | Aug. 14 | Aug. 14 |
| Oct. 23 1961 | S Wilson's White S Poitevine Supreme S Malou S Dark Wilson's Yellow | July 31 | July 31 - Aug. 21 | Aug. 14 | Aug. 21 |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Snow Crystal S Ind. Varieties Gold Lace Golden Crystal S Golden Crystal S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Yellow Deluxe S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | Aug. 7 | Aug. 7 - Aug. 14 | Aug. 21 | Aug. 14 |
| | Monty Luna Quicksilver Snowclad Sundial Resolute Dark Ribbon S Perle Angevine | Aug. 7 | Aug. 7 - Aug. 21 | Aug. 21 | Aug. 21 |
| | Royal Bronze Bridesmaid | Aug. 14 | Aug. 14 - Aug. 21 | Aug. 28 | Aug. 21 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-----------------|--|---------------------------------------|-------------------|---------|---------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | July 31 | July 31 - Aug. 14 | Aug. 14 | Aug. 14 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | July 31 | July 31 - Aug. 21 | Aug. 14 | Aug. 21 |
| | Splurge S Harmony S Valentine Vedova Venoya Heather Blue Ridge | Aug. 7 | Aug. 7 - Aug. 14 | Aug. 21 | Aug. 14 |
| Bloom | Whiterion Chalk Cliff Luminary Scepter S Red Star Criterion Personality Humdinger Caress | Aug. 7 | Aug. 7 - Aug. 21 | Aug. 21 | Aug. 21 |
| Oct. 30 1961 | S Wilson's White S Poitevine Supreme S Malou S Dark Wilson's Yellow | Aug. 7 | Aug. 7 - Aug. 28 | Aug. 21 | Aug. 28 |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Snow Crystal S Ind. Varieties Gold Lace Golden Crystal S Golden Yel. Princess Anne Cream Yel. Princess Anne S Golden Gate S Yellow Deluxe S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | Aug. 14 | Aug. 14 - Aug. 21 | Aug. 28 | Aug. 21 |
| | Monty Luna Quicksilver Snowclad Sundial Resolute Dark Ribbon S Perle Angevine | Aug. 14 | Aug. 14 - Aug. 28 | Aug. 28 | Aug. 28 |
| | Royal Bronze Bridesmaid | Aug. 21 | Aug. 21 - Aug. 28 | Sept. 4 | Aug. 28 |

VARIETY DESCRIPTION



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-------------------------|--|---------------------------------------|-------------------|----------|---------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Aug. 7 | Aug. 7 - Aug. 21 | Aug. 21 | Aug. 21 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Aug. 7 | Aug. 7 - Aug. 28 | Aug. 21 | Aug. 28 |
| | Splurge S Harmony S Valentine Vedova Venoya Heather Blue Ridge | Aug. 14 | Aug. 14 - Aug. 21 | Aug. 28 | Aug. 21 |
| Bloom Nov. 6 1961 | Chalk Cliff Scepter S Red Star Criterion Personality Caress Humdinger | Aug. 14 | Aug. 14 - Aug. 28 | Aug. 28 | Aug. 28 |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Snow Crystal S Ind. Varieties Gold Lace Golden Crystal S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Pink Deluxe | Aug. 21 | Aug. 21 - Aug. 28 | Sept. 4 | Aug. 28 |
| | Luna Dark Ribbon S Perle Angevine Queen of Pinks | Aug. 21 | Aug. 21 - Sept. 4 | Sept. 4 | No |
| | Royal Bronze Bridesmaid | Aug. 28 | Aug. 28 - Sept. 4 | Sept. 11 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|------------------|--|---------------------------------------|--------------------|----------|---------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Aug. 14 | Aug. 14 - Aug. 28 | Aug. 28 | Aug. 28 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Aug. 14 | Aug. 14 - Sept. 4 | Aug. 28 | Sept. 4 |
| | Splurge S Harmony S Valentine Vedova Venoya Heather Blue Ridge | Aug. 21 | Aug. 21 - Aug. 28 | Sept. 4 | Aug. 28 |
| Bloom Nov. 13 | Chalk Cliff Scepter S Red Star Criterion Personality Caress Humdinger | Aug. 21 | Aug. 21 - Sept. 4 | Sept. 4 | Sept. 4 |
| 1961 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Snow Crystal S Ind. Varieties Gold Lace Golden Crystal S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | | Aug. 28 - Sept. 4 | Sept. 21 | Sept. 4 |
| | Luna Dark Ribbon S Perle Angevine Queen of Pinks | Aug. 28 | Aug. 28 - Sept. 11 | Sept. 11 | No |
| | Royal Bronze Bridesmaid | Sept. 4 | Sept. 4 - Sept. 11 | Sept. 18 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|------------------|---|---------------------------------------|---------------------|----------|---------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Aug. 21 | Aug. 21 - Sept. 4 | Sept. 4 | Sept. 4 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Aug. 21 | Aug. 21 - Sept. 11 | Sept. 4 | No |
| | Splurge S Harmony S Valentine Vedova Venoya Heather Blue Ridge | Aug. 28 | Aug. 28 - Sept. 4 | Sept. 11 | Sept. 4 |
| Bloom Nov. 20 | Chalk Cliff Scepter S Red Star Criterion Personality Caress Humdinger | Aug. 28 | Aug. 28 - Sept. 11 | Sept. 11 | No |
| 1961 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Snow Crystal S Ind. Varieties Gold Lace Golden Crystal S Golden Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | | Sept. 4 - Sept. 11 | Sept. 18 | No |
| | Luna Dark Ribbon S Perle Angevine Queen of Pinks | Sept. 4 | Sept. 4 - Sept. 18 | Sept. 18 | No |
| | Royal Bronze Bridesmaid | Sept. 11 | Sept. 11 - Sept. 21 | Sept. 25 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|--------------------------|---|---------------------------------------|---------------------|----------|----------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Aug. 28 | Aug. 28 - Sept. 11 | Sept. 11 | Sept. 11 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Aug. 28 | Aug. 28 - Sept. 18 | Sept. 11 | No |
| | Splurge S Harmony S Valentine Vedova Venoya Heather Blue Ridge | Sept. 4 | Sept. 4 - Sept. 11 | Sept. 18 | Sept. 11 |
| Bloom Nov. 27 1961 | Chalk Cliff Scepter S Red Star Criterion Personality Caress Humdinger | Sept. 4 | Sept. 4 - Sept. 18 | Sept. 18 | No |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Snow Crystal S Ind. Varieties Gold Lace Golden Crystal S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | | Sept. 11 - Sept. 18 | Sept. 25 | No |
| | Luna Dark Ribbon S Perle Angevine Queen of Pinks | Sept. 11 | Sept. 11 - Sept. 25 | Sept. 25 | No |
| | Royal Bronze Bridesmaid | Sept. 18 | Sept. 18 - Sept. 25 | Oct. 2 | No |

VARIETY DESCRIPTION



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|--------------------------|---|---------------------------------------|---------------------|----------|-------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Sept. 4 | Sept. 4 - Sept. 18 | Sept. 18 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Sept. 4 | Sept. 4 - Sept. 25 | Sept. 18 | No |
| Bloom | Splurge S Harmony S Valentine Venoya Heather Blue Ridge | Sept. 11 | Sept. 11 - Sept. 18 | Sept. 25 | No |
| Dec. 4 1961 | Chalk Cliff Scepter S Red Star Criterion Personality Caress Humdinger | Sept. 11 | Sept. 11 - Sept. 25 | Sept. 25 | No |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal S Yellow Deluxe S Golden Yel, Princess Ann S Cream Yel, Princess Ann S Golden Gate S Bronze Princess Anne Apricot Princess Anne S Princess Anne Pink Deluxe | Sept. 18 | Sept. 18 - Sept. 25 | Oct. 2 | No |
| | Luna Dark Ribbon Queen of Pinks Bridesmaid | Sept. 18 | Sept. 18 - Oct. 2 | Oct. 2 | No |
| | Achievement Bonnaffon Deluxe S Clipper Charm | Sept. 11 | Sept. 11 - Sept. 25 | Sept. 25 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Sept. 11 | Sept. 11 - Oct. 2 | Sept. 25 | No |
| | Splurge S Harmony S Valentine Venoya Heather Blue Ridge | Sept. 18 | Sept. 18 - Sept. 25 | Oct. 2 | No |
| Bloom Dec. 11 1961 | Chalk Cliff Scepter S Red Star Criterion Personality Caress Humdinger | Sept. 18 | Sept. 18 - Oct. 2 | Oct. 2 | No |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal S Yellow Deluxe S Golden Yel. Princess Anne Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne Apricot Princess Anne Princess Anne | e Sept. 25 | Sept. 25 - Oct. 2 | Oct. 9 | No |
| | Luna Dark Ribbon Queen of Pinks Bridesmaid | Sept. 25 | Sept. 25 - Oct. 9 | Oct. 9 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|--------------------------|---|---------------------------------------|--------------------|---------|-------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Sept. 18 | Sept. 18 - Oct. 2 | Oct. 2 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Sept. 18 | Sept. 18 - Oct. 9 | Oct. 2 | No |
| Bloom | Splurge S Harmony S Valentine Venoya Heather Blue Ridge | Sept. 25 | Sept. 25 - Oct. 2 | Oct. 9 | No |
| Dec. 18 1961 | Chalk Cliff Scepter S Red Star Criterion Personality Caress Humdinger | Sept. 25 | Sept. 25 - Oct. 9 | Oct. 9 | No |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal S Yellow Deluxe S Golden Yel. Princess Ann S Cream Yel. Princess Ann S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Pink Deluxe | ne Oct. 2 | Oct. 2 - Oct. 9 | Oct. 16 | No |
| | Luna Dark Ribbon Queen of Pinks Bridesmaid | Oct. 2 | Oct. 2 - Oct. 16 | Oct. 16 | No |
| | Achievement Bonnaffon Deluxe S Clipper Charm | Sept. 25 | Sept. 25 - Oct. 9 | Oct. 9 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Sept. 25 | Sept. 25 - Oct. 16 | Oct. 9 | No |
| | Splurge S Harmony S Valentine Venoya Heather Blue Ridge | Oct. 2 | Oct. 2 - Oct. 9 | Oct. 16 | No |
| Bloom Dec. 25 1961 | Chalk Cliff Scepter S Red Star Criterion Personality Caress Humdinger | Oct. 2 | Oct. 2 - Oct. 16 | Oct. 16 | No |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal S Yellow Deluxe S Golden Yel. Princess Anno S Cream Yel. Princess Anno S Golden Gate S Bronze Princess Anno S Apricot Princess Anno S Princess Anno S Princess Anno S Princess Anno | | Oct. 9 - Oct. 16 | Oct. 23 | No |
| | Luna Dark Ribbon Queen of Pinks Bridesmaid | Oct. 2 | Oct. 2 - Oct. 23 | Oct. 23 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|----------------|---|---------------------------------------|-------------------|---------|-------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Oct. 2 | Oct. 2 - Oct. 16 | Oct. 16 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Oct. 2 | Oct. 2 - Oct. 23 | Oct. 16 | No |
| Bloom | Splurge S Harmony S Valentine Heather Blue Ridge | Oct. 9 | Oct. 9 - Oct. 16 | Oct. 23 | No |
| Jan. 1 1962 | Chalk Cliff S Red Star Criterion Personality Caress | Oct. 2 | Oct. 2 - Oct. 23 | Oct. 23 | No |
| 1002 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal S Yellow Deluxe S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | Oct. 9 | Oct. 9 - Oct. 23 | Oct. 30 | No |
| | Luna Queen of Pinks Bridesmaid | Oct. 9 | Oct. 9 - Oct. 30 | Oct. 30 | No |
| | Achievement Bonnaffon Deluxe S Clipper Charm | Oct. 2 | Oct. 2 - Oct. 23 | Oct. 23 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Oct. 2 | Oct. 2 - Oct. 30 | Oct. 23 | No |
| Bloom | Splurge S Harmony S Valentine Heather Blue Ridge | Oct. 9 | Oct. 9 - Oct. 23 | Oct. 30 | No |
| Jan. 8 | Chalk Cliff S Red Star Criterion Personality Caress | Oct. 9 | Oct. 9 - Oct. 30 | Oct. 30 | No |
| 1962 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal S Yellow Deluxe S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | Oct. 16 | Oct. 16 - Oct. 30 | Nov. 6 | No |
| | Luna Queen of Pinks Bridesmaid | Oct. 16 | Oct. 16 - Nov. 6 | Nov. 6 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-----------------|---|---------------------------------------|-------------------|-----------------|-------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Oct. 9 | Oct. 9 - Oct. 30 | Oct. 30 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Oct. 9 | Oct. 9 - Nov. 6 | Oct. 30 | No |
| Bloom | Splurge S Harmony S Valentine Heather Blue Ridge | Oct. 16 | Oct. 16 - Oct. 30 | Nov. 6 | · No |
| Jan. 15 1962 | Chalk Cliff S Red Star Criterion Personality Caress | Oct. 16 | Oct. 16 - Nov. 6 | Nov. 6 | No |
| | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal S Yellow Deluxe S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate B Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | Oct. 23 | Oct. 23 - Nov. 6 | N ov. 13 | No |
| | Luna Queen of Pinks Bridesmaid | Oct. 23 | Oct. 23 - Nov. 13 | Nov. 13 | No |
| | Achievement Bonnaffon Deluxe S Clipper Charm | Oct. 16 | Oct. 16 - Nov. 6 | Nov. 6 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Oct. 16 | Oct. 16 - Nov. 13 | Nov. 6 | No |
| Bloom | Splurge S Harmony S Valentine Heather Blue Ridge | Oct. 23 | Oct. 23 - Nov. 6 | Nov. 13 | No |
| Jan. 22 | Chalk Cliff S Red Star Criterion Personality Caress | Oct. 23 | Oct. 23 - Nov. 13 | N ov. 13 | No |
| 1962 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal S Yellow Deluxe S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Pink Deluxe | Oct. 30 | Oct. 30 - Nov. 13 | Nov. 20 | No |
| | Luna Queen of Pinks Bridesmaid | Oct. 30 | Oct. 30 - Nov. 20 | Nov. 20 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-------------------------|--|---------------------------------------|-------------------|---------|-------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Oct. 23 | Oct. 23 - Nov. 13 | Nov. 13 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Oct. 23 | Oct. 23 - Nov. 20 | Nov. 13 | No |
| Bloom | Splurge S Harmony S Valentine Heather Blue Ridge | Oct. 30 | Oct. 30 - Nov. 13 | Nov. 20 | No |
| Jan. 29 1962 | Chalk Cliff S Red Star Criterion Personality Caress | Oct. 30 | Oct. 30 - Nov. 20 | Nov. 20 | No |
| 1902 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal Snow Crystal S Yellow Deluxe S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Pink Deluxe | Nov. 6 | Nov. 6 - Nov. 20 | Nov. 27 | No |
| , | Luna Queen of Pinks Bridesmaid | Nov. 6 | Nov. 6 - Nov. 27 | Nov. 27 | No |
| | Achievement Bonnaffon Deluxe S Clipper Charm | Oct. 30 | Oct. 30 - Nov. 20 | Nov. 20 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Oct. 30 | Oct. 30 - Nov. 27 | Nov. 20 | No |
| Dloom | Splurge S Harmony S Valentine Heather Blue Ridge | Nov. 6 | Nov. 6 - Nov. 20 | Nov. 27 | No |
| Bloom Feb. 5 1962 | Chalk Cliff S Red Star Criterion Personality Caress | Nov. 6 | Nov. 6 - Nov. 27 | Nov. 27 | No |
| | Ice Follies S White Deluxe Starburst Snow Crystal Little America Queen's Lace Golden Crystal S Yellow Deluxe S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne S Pink Deluxe | Nov. 13 | Nov. 13 - Nov. 27 | Dec. 4 | No |
| | Luna Queen of Pinks Bridesmaid | Nov. 13 | Nov. 13 - Dec. 4 | Dec. 4 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|------------------|--|---------------------------------------|-------------------|---------|-------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Nov. 6 | Nov. 6 - Nov. 27 | Nov. 27 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Nov. 6 | Nov. 6 - Dec. 4 | Nov. 27 | No |
| Bloom | Splurge S Harmony S Valentine Heather Blue Ridge | Nov. 13 | Nov. 13 - Nov. 27 | Dec. 4 | No |
| Feb. 12 | Chalk Cliff S Red Star Criterion Personality Caress | Nov. 13 | Nov. 13 - Dec. 4 | Dec. 4 | No |
| 1962 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal Snow Crystal S Yellow Deluxe S Golden Yel. Princess Anne Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne S Princess Anne | Nov. 20 | Nov. 20 - Dec. 4 | Dec. 11 | No |
| | Luna Queen of Pinks Bridesmaid | Nov. 20 | Nov. 20 - Dec. 11 | Dec. 11 | No |
| | Achievement Bonnaffon Deluxe S Clipper Charm | Nov. 13 | Nov. 13 - Dec. 4 | Dec. 4 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Nov. 13 | Nov. 13 - Dec. 11 | Dec. 4 | No |
| Disass | Splurge S Harmony S Valentine Heather Blue Ridge | Nov. 20 | Nov. 20 - Dec. 4 | Dec. 11 | No |
| Bloom Feb. 19 | Chalk Cliff S Red Star Criterion Personality Caress | Nov. 20 | Nov. 20 - Dec. 11 | Dec. 11 | No |
| 1962 | Ice Follies S White Deluxe Starburst Snow Crystal Little America Queen's Lace Golden Crystal Yellow Deluxe S Golden Yel. Princess Anne Cream Yel. Princess Anne S Golden Gate B Bronze Princess Anne Apricot Princess Anne Princess Anne Princess Anne | Nov. 27 | Nov. 27 - Dec. 11 | Dec. 18 | No |
| | Luna Queen of Pinks Bridesmaid | Nov. 27 | Nov. 27 - Dec. 18 | Dec. 18 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-----------------|--|---------------------------------------|-------------------|---------|-------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Nov. 20 | Nov. 20 - Dec. 11 | Dec. 11 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Nov. 20 | Nov. 20 - Dec. 18 | Dec. 11 | No |
| Bloom | Splurge S Harmony S Valentine Heather Blue Ridge | Nov. 27 | Nov. 27 - Dec. 11 | Dec. 18 | No |
| Feb. 26 1962 | Chalk Cliff S Red Star Criterion Personality Caress Humdinger | Nov. 27 | Nov. 27 - Dec. 18 | Dec. 18 | No |
| 1902 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal Snow Crystal S Yellow Deluxe S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Pink Deluxe | | Dec. 4 - Dec. 18 | Dec. 25 | No |
| | Luna Queen of Pinks Bridesmaid | Dec. 4 | Dec. 4 - Dec. 25 | Dec. 25 | No |
| | Achievement Bonnaffon Deluxe S Clipper Charm | Nov. 27 | Nov. 27 - Dec. 18 | Dec. 18 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Nov. 27 | Nov. 27 - Dec. 25 | Dec. 18 | No |
| Dlaam | Splurge S Harmony S Valentine Heather Blue Ridge | Dec. 4 | Dec. 4 - Dec. 18 | Dec. 25 | No |
| Bloom Mar. 5 | Chalk Cliff S Red Star Criterion Personality Caress Humdinger | Dec. 4 | Dec. 4 - Dec. 25 | Dec. 25 | No |
| 1962 | Ice Follies S White Deluxe Starburst Snow Crystal Little America Queen's Lace Golden Crystal Y ellow Deluxe S Golden Yel, Princess Anne Cream Yel, Princess Anne S Golden Gate Bronze Princess Anne Apricot Princess Anne Princess Anne Princess Anne | Dec. 11 | Dec. 11 - Dec. 25 | Jan. 1 | No |
| | Luna Queen of Pinks Bridesmaid | Dec. 11 | Dec. 11 - Jan. 1 | Jan. 1 | No |



| | | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|------------------|---|--|---------------------------------------|-------------------|---------|-------|
| | s | Achievement Bonnaffon Deluxe Clipper Charm | Dec. 4 | Dec. 4 - Dec. 25 | Dec. 25 | No |
| | S | Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Dec. 4 | Dec. 4 - Jan. 1 | Dec. 25 | No |
| Bloom | S | Splurge Harmony Valentine Heather Blue Ridge | Dec. 11 | Dec. 11 - Dec. 25 | Jan. 1 | No |
| Mar. 12 1962 | s | Chalk Cliff Red Star Criterion Personality Caress Humdinger | Dec. 11 | Dec. 11 - Jan. 1 | Jan. 1 | No |
| 1302 | 555555 | Ice Follies White Deluxe Starburst Little America Queen's Lace Golden Crystal Snow Crystal Yellow Deluxe Golden Yel. Princess Anne Cream Yel. Princess Anne Golden Gate Bronze Princess Anne Apricot Princess Anne Princess Anne Pink Deluxe | Dec. 18 | Dec. 18 - Jan. 1 | Jan. 8 | No |
| | | Luna Queen of Pinks Bridesmaid | Dec. 18 | Dec. 18 - Jan. 8 | Jan. 8 | No |
| | s | Achievement Bonnaffon Deluxe Clipper Charm | Dec. 11 | Dec. 11 - Jan. 1 | Jan. 1 | No |
| | s | Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Dec. 11 | Dec. 11 - Jan. 8 | Jan. 1 | No |
| | S | Splurge Harmony Valentine Heather Blue Ridge | Dec. 18 | Dec. 18 - Jan. 1 | Jan. 8 | No |
| Bloom Mar. 19 | s | Chalk Cliff Red Star Criterion Personality Caress Humdinger | Dec. 18 | Dec. 18 - Jan. 8 | Jan. 8 | No |
| 1962 | 8 8888888888888888888888888888888888888 | Ice Follies White Deluxe Starburst Snow Crystal Little America Queen's Lace Golden Crystal Yellow Deluxe Golden Yel. Princess Anne Cream Yel. Princess Anne Golden Gate Bronze Princess Anne Apricot Princess Anne Princess Anne Pink Deluxe | Dec. 25 | Dec. 25 - Jan. 8 | Jan. 15 | No |
| | | Luna Queen of Pinks Bridesmaid | Dec. 25 | Dec. 25 - Jan. 15 | Jan. 15 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|------------------|--|---------------------------------------|-------------------|---------|-------|
| 55 | Achievement Bonnaffon Deluxe S Clipper Charm | Dec. 18 | Dec. 18 - Jan. 8 | Jan. 8 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Dec. 18 | Dec. 18 - Jan. 15 | Jan. 8 | No |
| | Splurge S Harmony Heather Blue Ridge | Dec. 25 | Dec. 25 - Jan. 8 | Jan. 15 | No |
| Bloom Mar. 26 | | Dec. 25 | Dec. 25 - Jan. 15 | Jan. 15 | No |
| 1962 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal Snow Crystal S Yellow Deluxe S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne S Apricot Princess Anne P Pink Deluxe | Jan. 1 | Jan. 1 - Jan. 15 | Jan. 22 | No |
| | Monty Quicksilver Snowclad Luna Queen of Pinks Blue Ribbon Bridesmaid | Jan. 1 | Jan. 1 - Jan. 22 | Jan. 22 | No |
| | Achievement Bonnaffon Deluxe S Clipper Charm | Dec. 25 | Dec. 25 - Jan. 15 | Jan. 15 | No |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Dec. 25 | Dec. 25 - Jan. 22 | Jan. 15 | No |
| | Splurge S Harmony Heather Blue Ridge | Jan. 1 | Jan. 1 - Jan. 15 | Jan. 22 | No |
| Bloom | Chalk Cliff S Red Star Criterion Personality Caress Humdinger | Jan. 1 | Jan. 1 - Jan. 22 | Jan. 22 | No |
| Apr. 2 1962 | Ice Follies S White Deluxe Starburst Little America Queen's Lace Golden Crystal Snow Crystal S Yellow Deluxe S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne S Princess Anne | Jan. 8 | Jan. 8 - Jan. 22 | Jan. 29 | No |
| | Monty Quicksilver Snowclad Luna Queen of Pinks Blue Ribbon Bridesmaid | Jan. 8 | Jan. 8 - Jan. 29 | Jan. 29 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|----------------|--|---------------------------------------|-------------------|---------|-----------------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Jan. 1 | Jan. 1 Jan. 22 | Jan. 22 | Mar. 12 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Jan. 1 | Jan. 1 - Jan. 29 | Jan. 22 | Ma r. 19 |
| | Splurge S Harmony Heather Blue Ridge | Jan. 8 | Jan. 8 – Jan. 22 | Jan. 29 | Mar. 2 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Caress Humdinger | Jan. 8 | Jan. 8 - Jan. 29 | Jan. 29 | Mar. 19 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Jan. 8 | Jan. 8 - Feb. 5 | Jan. 29 | No |
| Bloom | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Starburst Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S White Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | Jan. 15 | Jan. 15 – Jan. 29 | Feb. 5 | Mar. 19 |
| Apr. 9 1962 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Jan. 15 | Jan. 15 - Feb. 5 | Feb. 5 | No |
| | Bridesmaid | Jan. 22 | Jan. 22 - Feb. 5 | Feb. 12 | No |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Jan. 22 | Jan. 22 - Feb. 12 | Feb. 12 | No |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Jan. 29 | Jan. 29 – Feb. 19 | Feb. 19 | No |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|----------|--|---------------------------------------|-------------------|---------|---------|
| s | Achievement Bonnaffon Deluxe Clipper Charm | Jan. 8 | Jan. 8-Jan. 29 | Jan. 29 | Mar. 12 |
| s | Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Jan. 8 | Jan. 8 - Feb. 5 | Jan. 29 | Mar. 19 |
| s | Splurge Harmony Heather Blue Ridge | Jan. 15 | Jan. 15 - Jan. 29 | Feb. 5 | Mar. 12 |
| s | Chalk Cliff Scepter Red Star Red Humdinger Criterion Personality Caress Humdinger | Jan. 15 | Jan. 15 - Feb. 5 | Feb. 5 | Mar. 19 |
| SSS | Malou | Jan. 15 | Jan. 15 – Feb. 12 | Feb. 5 | Mar. 26 |
| 00000000 | Cream Yel. Princess Anne Yellow Deluxe White Deluxe Golden Gate Bronze Princess Anne Apricot Princess Anne | Jan. 22 | Jan. 22 - Feb 5° | Feb. 12 | Mar. 19 |
| | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Jan. 22 | Jan. 22 - Feb. 12 | Feb. 12 | Mar. 26 |
| | Bridesmaid | Jan. 29 | Jan. 29 - Feb. 12 | Feb. 19 | Mar. 26 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Feb. 5 | Feb. 5 - Feb. 19 | Feb. 19 | No |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Feb. 12 | Feb. 12 - Feb. 26 | Feb. 26 | No |

Bloom Apr. 16 1962



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-----------------|--|---------------------------------------|-------------------|----------------|-----------------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Jan. 15 | Jan. 15 - Feb. 5 | Feb. 5 | Mar. 12 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Jan. 15 | Jan. 15 - Feb. 12 | Feb. 5 | Ma r. 19 |
| | Splurge S Harmony Heather Blue Ridge | Jan. 22 | Jan. 22 – Feb. 5 | Feb. 12 | Mar. 2 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Caress Humdinger | Jan. 22 | Jan. 22 - Feb. 12 | Feb. 12 | Mar. 19 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Jan. 29 | Jan. 29 - Feb. 19 | Feb. 12 | Mar. 26 |
| Bloom | S Ind. Varieties Ice Follies Snow Crystal Queen's Late Starburst Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S White Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne Princess Anne Princess Anne | Jan. 29 | Jan. 29 – Feb. 12 | Feb. 19 | Mar. 19 |
| Apr. 23 1962 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Feb. 5 | Feb. 5 - Feb. 19 | Feb. 19 | Mar. 26 |
| 1002 | Bridesmaid | Feb. 12 | Feb. 12 - Feb. 19 | Feb. 26 | Mar. 26 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Feb. 12 | Feb. 12 - Feb. 26 | Feb. 26 | Apr. 2 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Feb. 19 | Feb. 19 - Mar. 5 | Ma r. 5 | Apr. 9 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-----------------|--|---------------------------------------|--------------------------|----------------|----------------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Jan. 22 | Jan. 22 - Feb. 12 | Feb. 12 | Mar. 12 |
| | S Oregon Yellow Delaware Delaware Fujii Delaware Mermaid | Jan. 22 | Jan. 22 – Feb. 19 | Feb. 12 | Mar. 19 |
| | Splurge S Harmony Heather Blue Ridge | Jan. 29 | Jan. 29 – Feb. 12 | Feb. 19 | Mar. 12 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Caress Humdinger | Feb. 5 | Feb. 5 - Feb. 19 | Feb. 19 | Mar. 19 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Feb. 5 | Feb. 5 - Feb. 26 | Feb. 19 | Mar. 26 |
| Bloom | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Starburst Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S White Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne Princess Anne | Feb. 12 | Feb. 12 - Feb. 19 | Feb. 26 | Mar. 19 |
| Apr. 30 1962 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Feb. 12 | Feb. 12 - Feb. 26 | Feb. 26 | Mar. 26 |
| | Bridesmaid | Feb. 19 | Feb. 19 - Feb. 26 | Mar. 5 | Mar. 26 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Feb. 19 | Feb. 19 - M ar. 5 | Mar. 5 | Apr. 2 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Feb. 26 | Feb. 26 - Mar. 12 | Mar. 12 | Apr. 9 |





| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|---------------|--|---------------------------------------|-------------------|---------|-----------------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Feb. 5 | Feb. 5 - Feb. 19 | Feb. 19 | M ar. 12 |
| | S Oregon Yellow Delaware Fujii Delaware Mermaid | Feb. 5 | Feb. 5 - Feb. 26 | Feb. 19 | Mar. 19 |
| | Splurge S Harmony Heather Blue Ridge | Feb. 12 | Feb. 12 - Feb. 19 | Feb. 26 | Mar. 12 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Caress Humdinger | Feb. 12 | Feb. 12 - Feb. 26 | Feb. 26 | Mar. 19 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Feb. 12 | Feb. 12 - Mar. 5 | Feb. 26 | Mar. 26 |
| Bloom | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Starburst S White Deluxe Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne | Feb. 19 | Feb. 19 - Feb. 26 | Mar. 5 | Mar. 19 |
| May 7 1962 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Feb. 19 | Feb. 19 – Mar. 5 | Mar. 5 | Mar. 26 |
| 1002 | Bridesmaid | Feb. 26 | Feb. 26 - Mar. 5 | Mar. 12 | Mar. 26 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Feb. 26 | Feb. 26 - Mar. 12 | Mar. 12 | Apr. 2 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Mar. 5 | Mar. 5 - Mar. 19 | Mar. 19 | Apr. 9 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|----------------|--|---------------------------------------|--------------------------|-----------------|-----------------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Feb. 12 | Feb. 12 - Feb. 26 | Feb. 26 | Mar. 12 |
| | S Oregon Yellow Delaware Fujii Delaware Mermaid | Feb. 12 | Feb. 12 - Mar. 5 | Feb. 26 | Mar. 19 |
| | Splurge 8 Harmony Heather Blue Ridge | Feb. 19 | Feb. 19 - Feb. 26 | Mar. 5 | Mar. 12 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Caress Humdinger | Feb. 19 | Feb. 19 - M ar. 5 | Mar. 5 | Mar. 19 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Feb. 19 | Feb. 19 - Mar. 12 | Mar. 5 | Mar. 26 |
| Bloom | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Starburst S White Deluxe Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne S Princess Anne | Feb. 26 | Feb. 26 - Mar. 5 | Ma r. 12 | Mar. 19 |
| May 14 1962 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Feb. 26 | Feb. 26 - Mar. 12 | M ar. 12 | M ar. 26 |
| | Bridesmaid | Mar. 5 | Mar. 5 - Mar. 12 | Mar. 19 | Mar, 26 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Mar. 5 | Mar. 5 – Mar. 19 | Mar. 19 | Apr. 2 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | M ar. 12 | Mar. 12 - Mar. 26 | M ar. 26 | Apr. 9 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|-------------------------|--|---------------------------------------|-------------------|-----------------|-----------------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Feb. 19 | Feb. 19 - Mar. 5 | Mar. 5 | Mar. 12 |
| | S Oregon Yellow Delaware Fujii Delaware Mermaid | Feb. 19 | Feb. 19 - Mar. 12 | Mar. 5 | Mar. 19 |
| | Splurge S Harmony Heather Blue Ridge | Feb. 26 | Feb. 26 - Mar. 5 | M ar. 12 | Mar. 12 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Caress Humdinger | Feb. 26 | Feb. 26 - Mar. 12 | Mar. 12 | Mar. 19 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Feb. 26 | Feb. 26 - Mar. 19 | Mar. 12 | Mar. 26 |
| Bloom May 21 1962 | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace Starburst S White Deluxe Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe Golden Gate S Bronze Princess Anne S Apricot Princess Anne Princess Anne Princess Anne | Mar. 5 | Mar. 5 - Mar. 12 | Mar. 19 | M ar. 19 |
| | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Mar. 5 | Mar. 5 - Mar. 19 | M ar. 19 | Mar. 26 |
| | Bridesmaid | M ar. 12 | Mar. 12 - Mar. 19 | Mar. 26 | Mar. 26 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | M ar. 12 | Mar. 12 - Mar. 26 | M ar. 26 | Apr. 2 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | Mar. 19 | Mar. 19 - Apr. 2 | Apr. 2 | Apr. 9 |



| | VARIETIES | PLANT 5 OR 6 CUTTINGS IN 6" POT | LIGHTING PERIOD | PINCH | SHADE |
|----------------|--|---------------------------------------|--------------------------|-----------------|-----------------|
| | Achievement Bonnaffon Deluxe S Clipper Charm | Feb. 26 | Feb. 26 - Mar. 12 | Mar. 12 | Mar. 12 |
| | S Oregon Yellow Delaware Fujii Delaware Mermaid | Feb. 26 | Feb. 26 - Mar. 19 | Mar. 12 | M ar. 19 |
| | Splurge S Harmony Heather Blue Ridge | Mar. 5 | Mar. 5 - Mar. 12 | Mar. 19 | Mar. 12 |
| | Chalk Cliff Scepter S Red Star Red Humdinger Criterion Personality Caress Humdinger | Mar. 5 | Mar. 5 - Mar. 19 | Ma r. 19 | Ma r. 19 |
| | Granite State S Wilson's White S Malou S Dark Wilson's Yellow | Mar. 5 | Mar. 5 Mar. 26 | Mar. 19 | Mar. 26 |
| Bloom | S Ind. Varieties Ice Follies Snow Crystal Queen's Lace- Starburst S White Deluxe Golden Crystal Gold Lace S Golden Yel. Princess Anne S Cream Yel. Princess Anne S Yellow Deluxe S Golden Gate S Bronze Princess Anne S Apricot Princess Anne S Princess Anne S Princess Anne S Princess Anne | M ar. 12 | Mar. 12 - Mar. 19 | Mar. 26 | Mar. 19 |
| May 28 1962 | Monty Quicksilver Snowclad Luna Sundial Dark Ribbon Queen of Pinks | Mar. 12 | Mar. 12 - Mar. 26 | Mar. 26 | Mar. 26 |
| | Bridesmaid | Mar. 19 | Mar. 19 - Mar. 26 | Apr. 2 | Mar. 26 |
| | Joan-Ette Gloria Gardenia Peking Blazing Gold Cheyenne Radiance Caprice Zest Majestic Royal-Ette | Mar. 19 | Mar. 19 - A pr. 2 | Apr. 2 | Apr. 2 |
| | Ostosa Larry Chris. Columbus Jessamine Williams Diamond Yel. Chris. Columbus Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom Ethel Waters Minnehaha Mesabi Lipstick Remembrance Red Mischief Dolli-Ette Toronto Minnpink Purple Waters Spellbound Cecelia Ann Ladygo Mischief Joybringer Raspberry Ice Alert No. 2 Fuchsia Fairy | M ar. 26 | Mar. 26 - Apr. 9 | Apr. 9 | Apr. 9 |



NEW POT PLANT VARIETIES

WHITE

YGA Diamond

YGA White Deluxe

North and East—Year round. South—November through April. West—October through May.

YGA Starburst

North and East—Year round. South—November through April. West—Year round.

YELLOW

Dark Wilson's Yellow

YGA Jackstraw

Nov. 5 (10 week)—Large deep yellow feathered decorative. Originally bred to provide a yellow companion for Snow Crystal. Jackstraw develops a larger flower with improved form. Compared with Snow Crystal, it is of shorter habit best suited to medium treatment. Displays high and low temperature tolerance with fine, uniform response. Breaks are strong and numerous with foliage carried well to the flowers. Available February 6, 1961. Price..........Y-8A

North and East—Year round.
South—Year round.
West—Year round.

YGA Golden Crystal

Golden Gate

North and East—Mid-September through mid-June. South—November through April. West—Year round.

Golden Princess Anne

North and East—Mid-September through mid-June. South—November through April. West—Year round.

YGA Yellow Deluxe

Nov. 10 (10 week)—Bright, clear lemon yellow. Has all the size and strong habits of its parent Pink Deluxe. Far more durable under summer temperatures than Pink Deluxe. Useful the year round with tall treatment and especially valuable in winter when good yellows are scarce. Price.......Y-8A

YGA Splurge

Nov. 15 (11 week)—Large, golden or rich amber yellow decorative. Vivid color that is deeper and larger than Golden Yellow Princess Anne. Fine stem and foliage. Establish your plants well prior to pinching to provide for maximum breaking action. Attains $4\frac{1}{2}$ –5" diameter in pinched pots. Beautiful, versatile color with real sparkle and gloss that will enliven a dull winter. Requires tall treatment. Available June 5, 1961. Price. Y-8A

North and East—October through May. South—December through March. West—November through April.

YGA Achievement

> North and East—October through May. South—December through March. West—November through April.

BRONZE & RED

Fujii Delaware

North and East—September through May. South—September through May. West—Year round.



NEW POT PLANT VARIETIES

BRONZE & RED—Continued

Bronze Princess Anne

North and East—Mid-September through mid-June. South—November through April.

West-Year round.

Apricot Princess Anne

PINK

Ann Ladygo

Oct. 5 (7 week)—Small bright pink anemone. Dwarf, compact cushion habit ideal for spring pots and garden borders. Uniform and responsive in no light-no shade May pot programs or with short treatment. Best anemone available in the 7 week group. Topnotch garden variety. Price.....Y-7B

YGA Blue Ridge

> North and East—October through May. South—October through April. West—October through June.

YGA Caress

North and East—Year round. South—Year round. West—Year round.

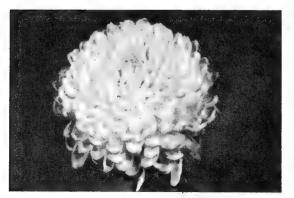
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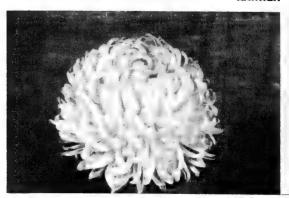
BLAZE



COLUMBIA



RAINIER





NEW VARIETIES STANDARDS

WHITE

Giant No. 4 Ind. White

YGA Columbia

North and East—Year round. South—November through May. West—Year round.

No. 2 Monument

Imp. Wh. Peter John

YELLOW

Golden Marblehead-New

Oct. 25 (9 week)—Deep yellow sport from Marblehead. Same habit and response as parent. Medium sized standard and fast disbud. Available Feb. 6, 1961. Price.....Y-7B

North and East—June through October. South—April through October.

West-May through October.

Yellow Nightengale

YGA Everest

Nov. 8 (10 week)—Large yellow incurved standard. Taller than News but shorter than Explorer. Everest is more uniform and easier to grow than Good News. It is frequently larger. Requires some protection from direct sun. Best uniformity is achieved with pinched crops. Everest's uniformly large flower size, fine form, substance and summer performance makes it deserving full consideration as a replacement for Good News. Available Feb. 6, 1961. Price. Y-8A

North and East—April through mid-December.

South—Greenhouse only. March through December.

West—March through December.

No. 2 Yellow Monument

No. 2 Yel. Shoesmith

YGA Rainier

Nov. 14 (10 week)—Large, solid incurve. Intense golden yellow. Size and form most frequently exceed News. It is demanding of high light conditions for best development of good size and form. Available Feb. 6, 1961. Price... Y-8A

North and East—May through mid-November.

South—April through November.

West-May through November.

No. 3 Yellow Glory

BRONZE & RED

Chambrier

Oct. 30 (9 week)—Intense reddish bronze standard and disbud. Essentially a high light, low temperature finish variety. It is unbeatable as a 5"-6" standard for pinched crops in Florida from December through March. It is equally outstanding in pinched programs for California cloth houses June through October. Available June 5, 1961. Price..........Y-8A

North and East—April through June; October through mid-November (pinched).

South—December through March (pinched). West—June through October (pinched).

Symbol-New

Nov. 1 (9 week)—Large amber bronze decorative standard. Golden yellow in summer. Essentially a very large disbud that frequently attains standard size. Possesses outstanding high and low temperature tolerance. A superb summer variety. Its stems are quite woody with slow water uptake. Scalding readily overcomes this and is recommended. Price. Y-7D

North and East—May through October.

South-Year round.

West—April through November.

SGA Blaze



NEW VARIETIES STANDARDS

BRONZE & RED—Continued

Maple Leaves

> North and East—Year round. South—December through March. West—Year round.

Kentucky Bronze

Imp. Br. Peter John

SPORTS OF SHOESMITH SALMON

The following sports of this excellent variety will be available June 5, 1961. Flower Date December 10 (13 week).

SGA Red Shoesmith Salmon

Color is close to a maroon salmon.

SGA Ruby Shoesmith Salmon

Color is a very deep, intensified salmon.

SGA Bronze Shoesmith Salmon

Color is closely identical to Bronzechip.

SGA Apricot Shoesmith Salmon

Color resembles the new Copperchip.

Available June 5, 1961

Price Y-8A

ELITE



PINK

YGA Bluebird

North and East—mid-April through mid-November. South—mid-March through mid-November. West—April through mid-November.

SGA Elite

No. 2 Dark Queen

Nov. 10 (10 week)—A reselection of Dark Orchid Queen that provides a larger flower, more intense color and more vigorous growth habit. Like all Queens it is best grown single stem in early winter programs. Initiation and early development requires 62°-64° minimum temperatures. Price.......Y-7D

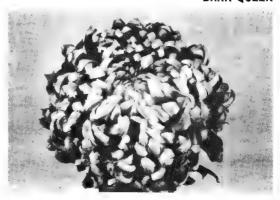
North and East—Mid-September through Mid-June. South—October through May.

West—Year round.

Kentucky Pink

SGA Shoesmith Salmon

DARK QUEEN





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NEW VARIETIES POMPONS SINGLES AND ANEMONES

WHITE

Candleglow

YGA Alabaster

North and East—May through October. South—March through December. West—April through November.

YGA Cloudbank

North and East—May through mid-November.
South—March through December.

West—April through mid-November.

Whitechip

North and East-June through September.

South-May through October.

West-Not recommended for California.

YGA Sovereign

North and East—Regular and Fast Crops April through mid-November.

South—March through June; Sept. through Dec.

West—March through December.

YGA Hurricane

North and East-April through mid-November.

South—March through December.

West—April through November.

YGA Milady

North and East-May through mid-November.

South—March through December.

West-April through November.

YGA Coronado

North and East—April through November.

South-March through December.

West—March through December.

YGA Skyline

North and East—Regular and Fast Crops April through mid-November.

South—Year round.

West—March through December.

YGA Cloudburst

North and East-Mid-April through mid-November.

South—December through June.

West-Mid-April through mid-November.

PRICE TABLE

All prices are per 100 cuttings, except fifty cuttings are priced per 50.

| PRICE PER 100 CUTTINGS | | | | | |
|------------------------|--------|---------|---------|---------|--------|
| PRICE | 50 | | | | 1000 |
| CLASS | ONLY | 100-250 | 300-450 | 500-950 | & UP |
| Y-8A | \$4.50 | \$8.75 | \$8.50 | \$8.25 | \$8.00 |
| Y-7D | 4.38 | 8.50 | 8.25 | 8.00 | 7.75 |
| Y-7C | 4.25 | 8.25 | 8.00 | 7.75 | 7.50 |
| Y-7B | 4.13 | 8.00 | 7.75 | 7.50 | 7.25 |
| Y-7A | 4.00 | 7.75 | 7.50 | 7.25 | 7.00 |

Prices above less Earned Credit Discount



NEW VARIETIES POMPONS SINGLES AND ANEMONES

WHITE—Continued

YGA Lightning

North and East—October through December; March through mid-May.

South-Not for outdoor culture.

West-No.

YGA Bride

Nov. 15 (11 week)—Small, white anemone with pure white cushion. Substance is good with extremely high production. Fine at cool 60° but do not finish extremely cold as it will develop some pinking. Practice center bud removal but do not disspray. Keep temperatures up to 62°-64° during bud initiation periods. Available June 5, 1961. Price.... Y-8A

North and East—March through mid-May; October through December.

South—March through May. West—October through April.

YGA Divinity

Nov. 20 (11 week)—Pure white intermediate anemone. Flowers with Shane and provides an ideal white companion for it. It is smaller than Shane, about Shasta size and height. Produces well but is intolerant of high temperature. A durable shipper. Available June 5, 1961. Price.........Y-8A

North and East-Mid-October through April.

South—December through March.

West-November through April.

YGA Iceflo

North and East—December through mid-March.

South-No.

West-No.

YELLOW

Yellow Bow

YGA Sunbeam

North and East—May through October.

South—March through December.

West-April through mid-November.

YGA Imperial

North and East-Mid-April through mid-November.

South—December through April.

West-Mid-April through mid-November.

YGA Yellow Stardust

North and East-April through mid-November.

South-Year round.

West-Year round.

YGA Golden Stardust

Nov. 12 (10 week)—Intermediate formal pompon. Golden yellow sport from Stardust. Identical habit and response. Color is clear at all temperatures. Tolerates a 56° minimum. Clean, vigorous growth. It is a durable and dependable shipper. Best with cool 60° or lower finishing temperatures.

North and East-April through mid-November.

South—Year round.

West-Year round.

YGA Highball

North and East—October through mid-November;
March through mid-May.

South-December through March.

West—October through November; March through April.

YGA Old Gold

North and East—October through mid-December; March through mid-May.

South—December through March.

West—October through mid-December; March through mid-May.

YGA Kingpin

North and East—Mid-November through March.

South-No.

West-No.



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NEW VARIETIES POMPONS SINGLES AND ANEMONES

YELLOW—Continued

Yellow Illini Cascade

North and East—December through February. South—No. West—No.

BRONZE & RED

Nobility

Remember Me

Flame Gaiety

North and East—May through June; mid-September through October.

South—November through January; April and May. West—April through October.

Panorama

Oct. 25 (9 week)—Large, vivid bronze decorative. Vigorous habit. The largest pompon available to the 9-week group. Tight sprays require center bud removal. Good high temperature tolerance and outstanding color retention. Always showy and colorful. Can also be disbudded. Price.......Y-8A

North and East—May through October. South—March through December. West—April through November.

Copperchip

November 1 (9 week)—Clear, bright amber bronze sport from Bronzechip. More resistant to high temperature fading and dulling of color. A strikingly beautiful color of instant appeal. Entirely different from Bronzechip. Price......Y-7D

North and East—May through mid-November. South—Year round. West—April through November.

Red Jetfire

> North and East—Mid-April through mid-November. South—November through May. West—April through mid-November.

YGA Bronze Etude

North and East—October through November. South—(Florida) December through February. West—October to November; March to April.

Copper Jubilation

Dark Bronze Ranger

North and East—Mid-Sept. to Nov.; mid-March to May.

South—November through February.

West—Mid-Sept. to Nov.; mid-March to May.

YGA Rebel

Nov. 20 (11 week)—Intense red daisy. Good red daisies that will produce and ship are all but unknown. Rebel will do this and more. It will light for Christmas and is extremely dependable all winter. The color holds and holds. It's a shining new start with five sharp points: color, production, vigor, response and durability. Available June 5, 1961.

North and East—October through April. South—December through March. West—October through April.

YGA Dragon

Nov 25 (12 week)—Bright red intermediate pompon. Outstanding growth habit with vigor, production and fine spray formation. Responds uniformly. Bred to extend the value of Rubaiyat in northern programs, it lights well and is more tolerant of low temperature than Cardinal Jetfire color that is bright and versatile especially at Christmas and Valentine's Day. Available June 5, 1961. Price..............Y-8A

North and East—Mid-October through mid-April.
South—December through February.
West—November through March.



NEW VARIETIES POMPONS SINGLES AND ANEMONES

BRONZE & RED—Continued

YGA Beau Brummell

Dec. 20 (14 week)—Brilliant golden bronze pompon. Strong, productive growth with a bright, glowing color that greatly enhances winter programs. Sprays are normally terminal with flowers of Iceberg size and form. Available June 5,Y-8A

North and East—December through February. South-No. West-No.

PINK

Pearl Chip

Nov. 1 (9 week)—Luminous shell pink or appleblossom sport from Bluechip. Available June 5, 1961. Price..... Y-8A North and East—May, June; mid-Sept. to mid-Nov. South—December through mid-March. West-April through November.

Cherrychip

Nov. 1 (9 week)—Rose pink sport from Bluechip. A scintillating new color that holds well into the warm period of summer. Fading is minimum. Same vigorous growth and production as parent. Price......Y-7D

North and East-May through mid-November. South-Year round. West-April through November.

YGA Overture

Nov. (10 week)—Large, luminous pink pompon. Sets a new standard for size, close to 4", vigor and production in pink spray pompons. Bred to provide a pink Iceberg, it has exceeded all expectations. Practice center bud removal and be prepared to enjoy a giant version of Portrait. Sprays are normally open and terminal. Shows little or no heat delay. Fading is seldom a problem but retention of shade to color and all possible attention to reduction of high temperature extremes will provide a superior product. Available Feb. 6,

> North and East—April through mid-November. South-Year round. West-Year round.

BEAU BRUMMELL



YGA Excello

Nov. 10 (10 week)—Intermediate pink daisy. Smart, terminal sprays with fine color and green eyes. Retains color well during high temperature periods with minimum pollen to mar disks. A successor to Reward. It is more durable in all respects. Sprays are more terminal; habit more vigorous. with Icebergs. Available Feb. 6, Price......Y-8A

> North and East-April through November. South-March through December. West-March through December.

Pink Jubilation

Nov. 15 (11 week)—Smooth, glistening light pink sport from Jubilation with no overtones of bronze. Color holds well and is far more popular than parent color. Same good vigor and production. Available June 5, 1961. Price......Y-8A

> North and East-Oct. to mid-Dec.; March to mid-May.

South—December through February. West-Oct. to mid-Dec.; March to mid-May.

YGA Signet

Nov. 20 (11 week)-Intermediate pink anemone with con-

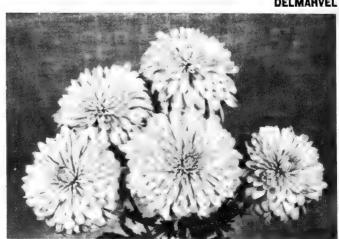
> North and East—October through April. South—December through March. West-October through April.

YGA Delmarvel

Nov. 20 (11 week)—Intermediate pink pompon. Marvelous new version of Delmar. Larger, more productive, more colorful with faster response and superior vigor throughout the winter period. It has all the qualities needed to achieve top rank for pink poms in this period. This is a "must have" in all spray programs. Available June 5, 1961. Price... Y-8A

North and East-October through April. South—December through mid-March. West-October through March.

DELMARVEL







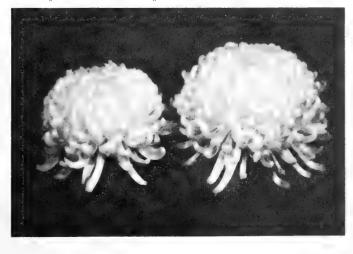
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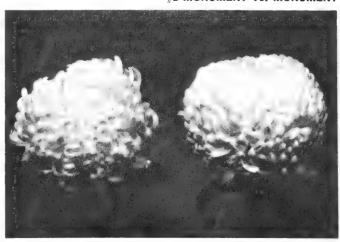
VARIETIES FOR YEAR-ROUND STANDARDS

| WHITE | | Anthony in the first of the second of the se | | |
|----------------------------|---|--|--|--|
| | Variety | Description | Natural Flowering Dat | Price e Code |
| 8 WEEK PINCH JULY 17 | Silver Sheen | Intermediate pure white incurve | Oct 20 | Y-6A Y-6B Y-7C |
| 9 WEEK PINCH JULY 24 | Ambassador Albatross | Medium clear white incurve Large ivory incurve White incurve Medium ivory white semi-incurved disbud | Oct. 25 | Y-6D Y-7A Y-6A Y-7D |
| 10 WEEK PINCH JULY 31 | Indianapolis White Imp. Ind. White No. 3 Ind. White White Prince Giant Betsy Ross Columbia (June '61) Crystal Queen Mefo The Favourite No. 2 Monument | hite. (June '61) Selected from No. 3 Ind. White Large white incurve. Large white incurve. Intermediate pure white incurve. Large white incurve Large tightly incurved ivory white standard. Pure white sport from Orchid Queen. Large ivory incurve. Large white incurve Greatly improved selection from Monument. Large white incurve. | Nov. 5 Nov. 5 Nov. 5 Nov. 5 Nov. 5 Nov. 10 Nov. 10 Nov. 10 Nov. 10 | Y-8A Y-5C Y-5C Y-8A Y-7A Y-7A Y-7A Y-7B Y-6A |
| 11 WEEK PINCH AUGUST 7 | Sterling Marketeer | Large pure white incurve Intermediate chalk white incurve | Nov. 15 Nov. 18 | Y-7D Y-6C |
| 12 WEEK PINCH AUGUST 14 | Chattanooga December Glory | John Selection from White Peter John | Nov. 25 | Y-7B Y-6C Y-7C Y-7D |
| 13 WEEK PINCH AUGUST 21 | December White | Intermediate white semi-incurve | Dec. 15 | Y-6C Y-7A Y-7B |
| YELLOW | | | | |
| 8 WEEK PINCH JULY 17 | Harvest Golden Celestra Mrs. Kidder Butterball | Intermediate lemon yellow reflex Large deep golden yellow decorative Small deep lemon yellow semi-incurve Large golden yellow incurve Intermediate deep lemon incurve Intermediate golden yellow semi-incurve | Oct. 15 Oct. 15 Oct. 20 Oct. 20 | Y-6C Y-8A Y-8A Y-6B Y-7D Y-6D |

GIANT #4 IND. WHITE VS. #3 IND. WHITE









VARIETIES FOR YEAR-ROUND STANDARDS

| YELLOW- | Continued | | Ag . An . While | |
|-------------------------------|--|---|--|--|
| | Variety | Description | latural ering Dat | Price e Code |
| 9 WEEK PINCH JULY 24 | Yellow Ambassador Mecca Sunglow Yellow Albatross Good News Yellow Ivanhoe | Medium lemon yellow incurve ad Deep yellow sport from Marblehead Intermediate light lemon yellow incurve Large deep lemon yellow incurve Large golden yellow incurve Large lemon yellow sport from Albatross Large deep yellow incurve Golden yellow sport from Ivanhoe Deep lemon yellow incurved standard | Oct. 25 Oct. 25 Oct. 25 Oct. 25 Oct. 25 Nov. 1 Nov. 1 Nov. 1 | Y-6C Y-7B Y-6D Y-7C Y-7B Y-8A Y-6A Y-7C |
| 10 WEEK PINCH JULY 31 | Indianapolis Yellow Indianapolis Gold. Dk. Ind. Yellow Yellow Prince Yellow Prince YGA Explorer Yellow Betsy Ross. YGA Everest Yellow Marvel Cream Yel. Princess Gol. Yel. Princess A Yellow Queen No. 2 Yellow Queen Yellow Mefo Cream Mefo No. 2 Yellow Mon Golden Favourite Golden Shoesmith Yellow Shoesmith No. 2 Yellow Shoesmith No. 2 Yellow Shoesmith | Light golden yellow selection of Ind. Yellow Large lemon yellow incurve Deep lemon yellow incurve Intermediate yellow incurve Large golden yellow decorative Large deep yellow incurve Intermediate lemon yellow incurve Large yellow incurve Large deep lemon yellow ball-shaped incurve Large cream yellow decorative Large cream yellow decorative Large light lemon semi-incurve Large light lemon semi-incurve Cream yellow sport of Yellow Queen Large deep lemon incurve Cream yellow sport from Mefo ument Improved selection from Yellow Monument Large bright yellow semi-incurved Large intensified yellow incurved Large yellow incurve Large yellow incurve Large yellow incurve Large intense golden yellow solid incurve | Nov. 5 Nov. 5 Nov. 5 Nov. 5 Nov. 5 Nov. 5 Nov. 5 Nov. 5 Nov. 10 Nov. 1 | Y-5C Y-6A Y-7A Y-8A Y-7C Y-6D Y-8A Y-7C Y-7B Y-6A Y-6D Y-7B Y-6D Y-6D Y-8A Y-6D Y-8A Y-6D Y-8A |
| 11 WEEK PINCH AUGUST 7 | Friendly Rival Harvester | Lemon yellow sport from Marketeer Intermediate intense golden yellow incurve Intermediate deep lemon yellow incurve Intermediate deep yellow incurve | Nov. 18 Nov. 20 Nov. 23 Nov. 23 | Y-7C Y-7B Y-6B Y-6D |
| 12 WEEK PINCH AUGUST 14 | Dk. Yel. Chattanoog Yellow Chattanooga Golden Pearson Sungold No. 3 Yellow Glory No. 2 Yellow Glory Golden Mrs. Ross | Large light lemon yellow decorative ga Deep lemon yellow sport Large light lemon incurve Intermediate light lemon incurve Large lemon yellow incurve Will replace the original Yellow Glory Dark yellow selection from Yellow Glory Large deep lemon incurve Intermediate golden yellow incurve | Nov. 25 Nov. 25 Nov. 25 Nov. 25 Nov. 25 Dec. 1 Dec. 1 Dec. 3 Dec. 3 | Y-7B Y-6D Y-6D Y-7A Y-7B Y-8A Y-8A Y-6C Y-8A |

KENTUCKY BRONZE









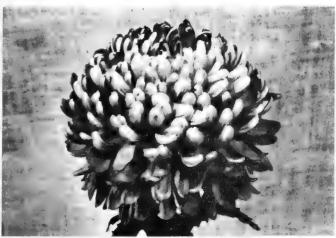
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VARIETIES FOR YEAR-ROUND STANDARDS

| YELLOW- | -Continued | and the second of the second o | agus Majir ju se pante 11 g | | * * 5 \$ |
|----------------------------|--|--|---|---|--|
| | Variety | Description | Natura Flowering | | Price Code |
| 13 WEEK PINCH AUGUST 21 | Smith's Yellow Smith's Cream Whi | | Dec. | 10 10 | Y-6C Y-7A Y-7B Y-7A |
| BRONZE & | & RED | | | | , , , , , , , , , , , , , , , , , , , |
| 8 WEEK PINCH JULY 17 | | Large golden bronze decorative | | | Y-6D Y-8A |
| 9 WEEK PINCH JULY 24 | Mrs. Palmero Bronze Palmero Chambrier (June ' Symbol Ivanhoe Detroit News | Orange bronze disbud Medium maroon red semi-incurve Medium coral bronze semi-incurve Intense reddish bronze standard and disbud Large amber bronze decorative disbud Russet bronze disbud Large reddish bronze incurve Intermediate orange bronze incurve | Oct. Oct. Nov. Nov. | 28 28 30 1 | Y-8A Y-8A Y-8A Y-7D Y-8A Y-6C Y-7A |
| 10 WEEK PINCH JULY 31 | Indianapolis Bronze Indianapolis Aprico Dk. Ind. Bronze Bronze Prince Anaconda Woking Scarlet Golden Gate Bronze Princess A Br. Orchid Queen Copper Queen Mrs. Roy | 61) Larger, deeper colored version of Woking Large bronze incurve Large bronze incurve Large reddish bronze incurve Large red bronze incurve Large brilliant scarlet bronze decorative disbud Large golden bronze decorative disbud Large rich amber bronze sport of Princess Anne Buff coral bronze incurve Large copper bronze incurve Large rich amber bronze sport of Princess Anne Buff coral bronze sport Large copper bronze incurve Large red incurve with copper reverse Intermediate deep crimson red reflex | Nov. Nov. Nov. Nov. Nov. Nov. Nov. Nov. | 5 5 8 10 10 10 10 10 | Y-8A Y-5C Y-8A Y-5C Y-8A Y-7B Y-7A Y-6C Y-8A Y-7A Y-6D Y-7D |
| 11 WEEK PINCH AUGUST 7 | Maple Leaves (Jur Balcombe Perfectio Red Balcombe Perf Calvert's Gold Calvert's Orange Valentine | (June '61) Bronze sport from Indianapolis Pink ne '61). Very large bronze fujii mum. n. Intermediate copper bronze incurve. ection. Bright red sport with copper bronze reverse. Intermediate golden bronze semi-incurve. Large reddish orange semi-incurve. Large red disbud decorative. Large rich reddish bronze semi-incurve. | Nov. Nov. Nov. Nov. Nov. Nov. Nov. | 15 18 18 20 20 20 | Y-8A Y-8A Y-7B Y-7A Y-7A Y-8A Y-7A Y-8A |
| 12 WEEK PINCH AUGUST 14 | Gladys Pearson Oak Leaf No. 2 Oak Leaf | n. Selection from Bronze Peter John Intermediate light copper bronze incurve Intermediate copper incurve Tightly incurved sport from Oak Leaf Intermediate deep crimson incurve | Nov. | 25 25 25 | Y-7B Y-7A Y-6B Y-6C Y-7D |

CHAMBRIER







VARIETIES FOR YEAR-ROUND STANDARDS

| BRONZE & | & RED—Conti | nued | | | |
|----------------------------|---|--|---|--|---|
| | Variety | Description Flo | Natura wering | | Price Code |
| 12 WEEK PINCH AUGUST 14 | SGA Ruby Shoesi SGA Bronze Shoe | ith Salmon—(June '61)—Maroon salmon disbud | Dec. | 10 10 | Y-8A Y-8A Y-8A Y-8A |
| PINK | | | | | |
| 8 WEEK PINCH JULY 17 | | Large lavender incurve | | | Y-7A Y-7A |
| 9 WEEK PINCH JULY 24 | YGA Miss America | Intermediate pink semi-incurve | Nov. | 1 | Y-8A |
| 10 WEEK PINCH JULY 31 | YGA Vanguard YGA Bluebird. J. W. Prince SGA Elite (June '6 Princess Anne Rosamund Orchid Queen Lavender Queen Dk. Orchid Queen No. 2 Dark Queen Laughter Pink F. Shoesmith. | Large pink incurve Intermediate bright lavender pink incurve Large pink decorative disbud Intermediate lavender pink incurve Intermediate lavender pink incurve Intermediate lavender pink incurve Large salmon pink decorative disbud Medium rose pink with coral overtone disbud Large light orchid pink semi-incurve Lavender sport of Orchid Queen Large deep lavender semi-incurved standard Dark pink reselection of Dark Orchid Queen Intermediate light lavender pink decorative Light pink sport from Fred Shoesmith Large bright shell pink semi-incurve | Nov. Nov. Nov. Nov. Nov. Nov. Nov. Nov. | 10 10 10 10 10 10 10 10 | Y-5 C Y-7B Y-8A Y-8A Y-6C Y-7C Y-7D Y-7D Y-6D Y-8A Y-8A |
| 11 WEEK PINCH AUGUST 7 | Calvert's Pink Helen Frick Thanksgiving Pink | une '61). Taller, larger, later sport from Ind. Pink. Intermediate orchid pink incurve. Intermediate light lavender incurve. Intermediate orchid pink decorative. Intermediate smooth lavender incurve. | Nov. Nov. Nov. | 17 20 23 | Y-8A Y-7C Y-7C Y-7A Y-7D |
| 12 WEEK PINCH AUGUST 14 | | | | | Y-8A Y-7A |
| 13 WEEK PINCH AUGUST 21 | | | | | Y-7B Y-8A |

KENTUCKY PINK

SHOESMITH SALMON







SPIDER AND FUJII VARIETIES

| WHITE | | er og far grenner i streder om mer eller er av mellen er færelskelpelselsemelselselse. | | | |
|----------|--|--|-----------------------|------------------|------------------------------|
| | Variety | Description | Natura Flowering I | • | Price Code |
| 9 WEEK | Donlope's White Spider | White Fujii mum Large ivory white spider Large white spider | Nov. | 25 1 1 | Y-8A Y-7B Y-6C |
| 10 WEEK | White Rayonnante | White sport of Mary Garden White spider, straight tube Large ivory white spider | Nov. | 1 5 6 | Y-8A Y-8A Y-8A |
| 11 WEEK | John Baumann | Large paper white duplex form spider | Nov. | 20 | Y-8A |
| YELLOW | | | | | |
| 9 WEEK | Yellow Lace | . Lemon yellow spider Lemon yellow spider Golden yellow sport | Nov. | 25 1 1 | Y-6A Y-7B Y-6C |
| 10 WEEK | Yellow Nightingale Imp. Yellow Rayonnante | . Chartreuse green spider Yellow sport from Nightingale Clear yellow spider Large lemon yellow delicate spider . | Nov. | 5 5 5 6 | Y-7B Y-7B Y-8A Y-8A |
| BRONZE & | RED . | | | | .* |
| 9 WEEK | Duchess | Medium to large bronze spider | Nov. | 1 | Y-7B |
| 10 WEEK | Nomago | . A bronze Rayonnante. . Light bronze spider. . Red bronze spider | Nov. | 5 5 13 | Y-8A Y-8A Y-8A |
| 11 WEEK | | . Large Fujii-formed standard Vivid golden bronze spider | | | Y-8A Y-8A |
| PINK | | | | | |
| 9 WEEK | Bunbu Mary Garden | . Large lavender pink spider | Nov. | 1 | Y-6C Y-8A |
| 10 WEEK | RayonnantePlum. | . Pink tube spider | Nov. | 5 10 | Y-8A Y-8A |

| | | F | PRICE PER 1 | 00 CUTTING | S |
|--------|---------|---------|-------------|------------|-----------|
| SYMBOL | 50 ONLY | 100-250 | 300-450 | 500-950 | 1000 & UF |
| | | | | | |
| Y-5C | 3.25 | 6.25 | 6.00 | 5.75 | 5.50 |
| Y-5D | 3.38 | 6.50 | 6.25 | 6.00 | 5.75 |
| Y-6A | 3.50 | 6.75 | 6.50 | 6.25 | 6.00 |
| Y-6B | 3.63 | 7.00 | 6.75 | 6.50 | 6.25 |
| Y-6C | 3.75 | 7.25 | 7.00 | 6.75 | 6.50 |
| Y-6D | 3.88 | 7.50 | 7.25 | 7.00 | 6.75 |
| Y-7A | 4.00 | 7.75 | 7.50 | 7.25 | 7.00 |
| Y-7B | 4.13 | 8.00 | 7.75 | 7.50 | 7.25 |
| Y-7C | 4.25 | 8.25 | 8.00 | 7.75 | 7.50 |
| Y-7D | 4.38 | 8.50 | 8.25 | 8.00 | 7.75 |
| Y-8A | 4.50 | 8.75 | 8.50 | 8.25 | 8.00 |

CHRYSANTHEMUM CUTTINGS PRICE LIST

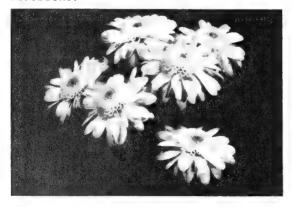
Effective January 1, 1961

The list price for each variety is indicated by a price symbol that appears with the variety name in the flowering program charts.



| WHITE | | The second of th | 1 - 3 m / 1 1 - 1 - 2 - 2 - 2 - 3 - 3 - 3 - 3 - 3 - 3 - 3 | |
|-----------------------------|---|--|--|--|
| | Variety | Description | Natural Flowering Dat | Price te Code |
| 7 WEEK PINCH JULY 10 | Horizon | . White pompon | Oct. 5 | Y-7B Y-6C Y-8A |
| 8 WEEK PINCH JULY 17 | Blizzard | . Intermediate paper white formal pompon | Oct. 15 | Y-8A Y-7B Y-7C |
| 9 WEEK PINCH JULY 24 | Silver Bow YGA Cloudbank Popcorn White Popcorn Keepsake White Keepsake Pinocchio YGA Alabaster YGA Crystallite Songster Memento Halo Whitechip Sea Gull Alaska White Doty | Intermediate white daisy Large formal pompon Intermediate pure white anemone Intermediate white pompon White sport of Popcorn White pompon Intermediate white pompon Small pure white button pompon Intermediate pure white daisy Intermediate paper white formal pompon Intermediate white pompon Intermediate chalk white single White daisy White sport from Bluechip Intermediate ivory pompon Intermediate white anemone Large white pompon Medium to small clear white decorative pompon | Oct. 25 Oct. 30 Nov. 1 Nov. 1 Nov. 1 | Y-6C Y-7C Y-8A Y-7A Y-6A Y-6C Y-6B Y-7B Y-8A Y-6B Y-7B Y-6D Y-6A Y-7C Y-7A |
| 10 WEEK PINCH JULY 31 | YGA Hurricane YGA Ping Pong. Supertop. Whitetop. Tiptop. Feathertop. Supreme Whitetop. Iceberg. Encore. YGA Snow Crystal. Whiterion. YGA Cloudburst (June '61) White Pennant. YGA Chalk Cliff. YGA Dawn Star. YGA Coronado. Pacesetter. | Intermediate white anemone. Intermediate white decorative pompon. Small clear white formal pompon. White decorative sport of Whitetop. Intermediate chalk white decorative. Tubular petaled form mutation from Whitetop. Deeply feathered sport of Whitetop. Large white decorative. Large white pompon. Intermediate white pompon. Medium ivory white spider. White sport of Criterion. Darge, white decorative pompon. Large pure white anemone. Pure white sport from Pennant. Large chalk white decorative. Intermediate pure white pompon. Clear white daisy. Intermediate pure white single. Intermediate ivory white pompon. | Nov. 5 Nov. 10 | Y-8A Y-8A Y-6A Y-6C Y-7A Y-7A Y-6D Y-6D Y-6A Y-8A Y-8A Y-7A Y-7A Y-7A Y-7A |

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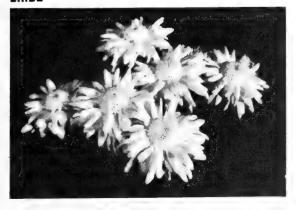


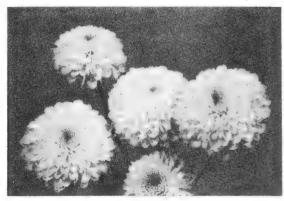




| WHITE—Continued | | | | | | |
|-------------------------------|--|--|---|--|--|--|
| | Variety | Natural Flowering Date | Pric te Cod | | | |
| 10 WEEK PINCH JULY 31 | ShastaLittle AmericaYGA EnsignYGA Skyline (Feb. YGA Stardust | Large white semi-anemone Large white anemone Intermediate pure white anemone Intermediate white decorative '61) Large ivory white formal pompon Intermediate white formal pompon Intermediate white feathered decorative | Nov. 10 Nov. 10 Nov. 10 Nov. 10 Nov. 10 Nov. 12 | Y-71 Y-56 Y-64 Y-74 Y-84 Y-61 Y-51 | | |
| 11 WEEK PINCH AUGUST 7 | White Norma. YGA Bride (June '6) YGA Lightning (Ju Sculpture. White Norma. Illini Starflower. YGA Ermine. Greco's Carnation. YGA Jupiter. Long Island Beauty. YGA Divinity (June Highbrow. YGA Ermine. Nevada. Priscilla. YGA Surfside. Paramount. Belray. | Pure white sport of Taffeta Large white anemone Small, white anemone with pure white cushion re '61). Very large white pompon Large ivory white daisy Large white anemone, yellow cushion Large white semi-anemone spoon Large white pompon Intermediate white pompon Large pure white decorative Large white anemone, yellow cushion '61). Pure white intermediate anemone Ivory white decorative Large white pom cream eye center Intermediate white anemone Intermediate white anemone Intermediate clear white pompon Large clear white single Intermediate ivory white pompon Large white pompon Large white pompon Intermediate pure white decorative | Nov. 15 Nov. 15 Nov. 15 Nov. 15 Nov. 15 Nov. 15 Nov. 18 Nov. 20 | Y-6 Y-7 Y-8 Y-7 Y-7 Y-8 Y-8 Y-7 Y-6 Y-8 Y-6 Y-8 Y-7 Y-7 Y-7 Y-7 | | |
| 12 WEEK PINCH AUGUST 14 | Silvercrest | Pure white button Small white formal pompon White anemone for Thanksgiving Large white anemone Large white single Intermediate white pompon Formal white pompon Medium clear white anemone | Nov. 25 Nov. 25 Nov. 28 Nov. 28 Nov. 30 Dec. 1 | Y-7 Y-8 Y-8 Y-7 Y-7 Y-8 Y-8 | | |
| 13 WEEK PINCH AUGUST 21 | Cameo White Enchantress Acclaim Spangles YGA Snowstorm Illini Alba YGA Northwind White Snowdrop Iceflo (June '61) Illini Starlet Yukon | Intermediate chalk white pompon Intermediate ivory decorative Large white disspray anemone Large ivory white formal type pompon Small white pompon Medium white decorative pompon Intermediate chalk white daisy Medium to large pure white single Pure white sport of Snowdrop Intermediate white pompon Intermediate white anemone Intermediate chalk white single White sport of Minstrel | Dec. 5 Dec. 8 Dec. 8 Dec. 10 Dec. 10 Dec. 10 | Y-5 Y-7 Y-7 Y-6 Y-7 Y-8 Y-8 Y-7 Y-8 | | |

BRIDE

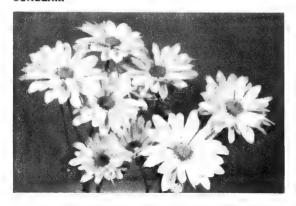


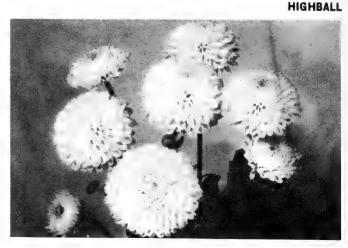




WHITE—Continued Natural Price Variety Description Flowering Date Code 13 WEEK Satellite . . Dolomite. Intermediate clear white pompon. Snowcrest. Small white button pompon. PINCH **AUGUST 21** Trenton ... Intermediate white pompon ... Silversmith ... Intermediate pure white decorative ... Snowcap ... Large white formal pompon ... Dec. 15 Y-6D 14 WEEK Y-6B Dec. 15 Y-6C Y-6D Dec. 15 PINCH Dec. 15 **AUGUST 28** Y-6D Y-7A Dec. 20 Dec. 20 ...Intermediate white decorative..... Revelation . . . 15 WEEK **Y-6A** Snow. Intermediate white pompon. Talmeda. Intermediate white pompon. Illini Cascade. Large clear white decorative Illini Snowbound. Large white informal decorative. Dec. 25 Y-6C Jan. 5 Jan. 5 Y-7A PINCH Y-6C SEPT. 4 YELLOW 7 WEEK Oct. 10 PINCH JULY 10 8 WEEK Oct. 15 **PINCH** Oct. 20 Oct. 25 JULY 17 Yellow Keepsake Rich yellow sport of Keepsake Yellow Keepsake Rich yellow sport of Keepsake Golden Herald Large yellow decorative Gold Coast Intermediate deep lemon formal pompon Yellow Dot Small two tone pompon Happiness Large golden yellow single Sunup Small deep yellow pompon YGA Sunbeam Intermediate to large golden yellow daisy Sauterne Intermediate intense yellow single YGA Flair Intense yellow daisy Schn. Yellow Daisy Intermediate yellow single Dandy Intermediate yellow pompon No. 2 Dandy Golden yellow pompon Statesman Small intense yellow pompon YGA Brilliancy Intermediate yellow single Yellowchip Bright lemon yellow sport of Bluechip Starbright Large deep lemon single **Y-8A** Oct. 25 Oct. 25 Y-6C Y-5D Oct. 25 Oct. 28 Y-6B Oct. 28 Oct. 30 Y-7D 9 WEEK Oct. 30 **PINCH** Nov. Y-8A JULY 24 Nov. Nov. Nov. Nov. Nov. Nov. Y-6C Starbright ... Large deep lemon single ... Nov. Sunray.....Small yellow anemone.... Nov.

SUNBEAM





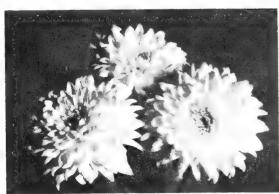


YELLOW—Continued Price Natural Flowering Date Code Description Variety YGA Imperial (June '61) Deep golden yellow intermediate pompon Barcarole Intermediate lemon pompon Goldtop Intermediate deep lemon yellow pompon Yellowtop Lemon yellow sport from Whitetop Yellow Tiptop Deep lemon sport from Tiptop Aztec Intermediate deep yellow daisy Mary Hall Intermediate deep lemon pompon Crescendo Large yellow pompon YGA Golden Bantam Small deep golden yellow pompon Yellow Beauregard Intermediate clear golden yellow pompon Yellow Iceberg Clear lemon yellow sport from Iceberg No. 2 Yellow Iceberg Deep yellow sport from Yellow Iceberg. Goldberg Large golden yellow pompon YGA Sunfire Medium to large dark yellow single YGA Yellow Crystal Medium lemon yellow spider YGA Golden Crystal Deep golden yellow sport from Snow Crystal Luxury Large clear yellow decorative Yellow Shasta Large light lemon yellow anemone Golden Shasta Large deep yellow nompon Jealousy Small intense yellow pompon Heydey Intermediate bright yellow pompon Lemon yellow single Lemon vellow single Nov. 10 WEEK Nov. Nov. **PINCH** Nov. Nov. JULY 31 Nov. Nov. 10 Nov. 10 Large deep yellow anemone Small intense yellow pompon Intermediate deep lemon yellow pompon Intermediate bright yellow pompon Lemon yellow single Golden yellow sport from Stardust Bright lemon yellow sport from Stardust Small yellow novelty decorative Intermediate golden yellow anemone Nov. 10 Nov. 10 Nov. 10 Nov. 10 Y-6B Heydey....Yellow Pacesetter.... Nov. 12 Nov. 12 Y-7D YGA Golden Stardust YGA Yellow Stardust Y-8A V-7B Nov. 12 Yellow Ill. Snowdrift...... YGA Fanfare..... Nov. 14 YGA Highball (June '61)... Intermediate deep yellow pompon..... Nov. 15 11 WEEK Nov. 15 Nov. 18 PINCH Nov. 20 **AUGUST 7** Nov. 20 Nov. 20 Nov. 20 Nov. 20 Nov. 20 Nov. 20 Nov. 23 Nov. 23 **V-**8A Y-8A Y-8A

YELLOW STARDUST



IMPERIAL





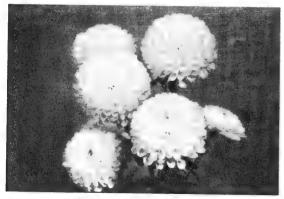
YELLOW—Continued

| | Variety | Description | Natur Flowering | | Price Code |
|-------------------------------|--|---|------------------------------------|----------------------------------|--|
| 12 WEEK PINCH AUGUST 14 | Highlander. Sunnyside. Illini Wampum. Yellow Valencia. Yellow Fortune. Golden Fortune. Omega. | Solid light yellow pompon Large golden yellow decorative Intermediate intense yellow decorative Intermediate deep lemon pompon Bright yellow anemone, greenish yellow cushion Large yellow single Deep yellow sport of Fortune Golden Yellow sport of Yellow Fortune Intermediate deep lemon pompon Deep lemon yellow sport of Galaxy | Nov. Nov. Nov. Nov. Dec. | 25 25 25 25 | Y-7D Y-7B Y-7B Y-6A Y-6D Y-7A Y-8A Y-8A Y-6D Y-6C |
| 13 WEEK PINCH AUGUST 21 | Yellow Acclaim Golden Acclaim Yellow Enchantress Cinderella YGA Spungold Dark Yellow Satellite Corsair | '61). Intermediate deep yellow, formal pompon Intermediate to large intense yellow decorative. Yellow sport from Acclaim Intermediate golden yellow selection from Acclaim Large bright golden buff disspray anemone Intermediate golden yellow single. Intermediate deep lemon yellow single Dark yellow sport from Yellow Satellite. Large yellow pompon Clear yellow Snowcrest sport, bright green eye | Dec. Dec. Dec. Dec. Dec. Dec. Dec. | 12 | Y-8A Y-6D Y-7B Y-6D Y-8A Y-8A Y-7D Y-6B Y-7D |
| 14 WEEK PINCH AUGUST 29 | Shamrock December Gold Golden Elegance Sun Valley Vibrant | Intermediate lemon yellow anemone. Dark yellow cushing Intermediate lemon yellow anemone. Large yellow decorative. Large deep golden yellow pompon. Intermediate lemon yellow decorative. Intermediate to large intense yellow pompon. Intermediate deep lemon decorative. Yellow pompon, as a late Gold Coast. | Dec. Dec. Dec. Dec. Dec. | 15 15 15 20 20 20 | Y-7D Y-7A Y-7B Y-8A Y-7B Y-7D Y-6C Y-7A |
| 15 WEEK PINCH SEPT. 4 | Yellow Snow | Deep yellow decorative Large deep lemon decorative. Intermediate yellow pompon. Intermediate golden yellow decorative. Yellow sport of Snowbound. (June '61) Large, lemon yellow sport from Illini Cascade | Dec. Dec. Jan. | 25 25 5 5 | Y-6B Y-7D Y-6C Y-7A Y-7A Y-8A |

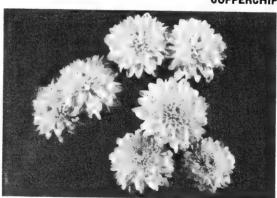
BRONZE & RED

| 7 WEEK | NobilityLarge maroon red decorative | Oct. | 5 | Y-7B |
|--------|---|------|---|------|
| | Huntsman Red bronze decorative Carmine Queen Carmine red pompon Carnival Large glowing orange pompon YGA Remember Me Large red spoon, bronze tubes. | | | |

KINGPIN



COPPERCHIP





| BRONZE | & RED—Conti | inued | * | * * |
|-----------------------------|--|--|--|--|
| | Variety | Description | Natural Flowering Date | Price Code |
| 8 WEEK PINCH JULY 17 | Dark Calumet | | Oct. 15 | Y-7C Y-7D Y-8A |
| 9 WEEK PINCH JULY 24 | Resolute | Large vivid bronze decorative. Large reddish bronze pompon. Intermediate Talisman bronze single. Intermediate bittersweet red daisy. Intermediate red bronze decorative. Small two tone bronze pompon. Small intense bronze pompon. Tawny bronze daisy. Intermediate brick to crimson red daisy. Intermediate golden apricot daisy. Intermediate lively orange bronze decorative. | Oct. 25 | Y-8A Y-8A Y-7A Y-7D Y-8A Y-6C Y-7B Y-6B Y-7D Y-7D Y-7A |
| 9 WEEK PINCH JULY 24 | YGA Tanfastic Firefly Buccaneer | Bright amber bronze sport from Bronzechip Intermediate deep bronze pompon Orange red pompon Rich orange bronze daisy Intermediate red single | Nov. 1 Nov. 1 | Y-7D Y-7C Y-8A Y-6D Y-7D |
| 10 WEEK Pinch July 31 | Jetfire Red Jetfire Nectarine Bronze Delight Orange Beauregard Dark Beauregard Dillon Beauregard Dillon Beauregard Dillon Beauregard Climax YGA Daybreak YGA Wizard Climax Red Climax Copperhead YGA Giltglow Red Humdinger No. 2 Red Humdi Bronze Masterpie Paragon | Intermediate intense orange bronze daisy. Intermediate flaming red decorative. Intense red sport from Jetfire Intermediate apricot orange decorative. Intermediate brick-red bronze daisy. rd. Light orange sport from Beauregard Reddish orange pompon. Intermediate mahogany bronze pompon. Intermediate intense reddish bronze pompon. Intermediate red bronze decorative. Intermediate red bronze single. Intermediate intense rust red pompon. Orange anemone. Intermediate orange bronze pompon. Intermediate intense orange pompon. Reddish bronze sport from Climax. Large coppery bronze decorative. Intermediate bi-colored single. Burgundy red sport from Humdinger. inger Color intensification on Red Humdinger. ce Intermediate bronze pompon. Large rust red pompon. Intermediate orange bronze daisy. | Nov. 5 Nov. 10 Nov. 11 Nov. 11 Nov. 11 Nov. 12 Nov. 12 | Y-8A Y-6D Y-7C Y-8A Y-7A Y-6A Y-6A Y-6B Y-7A Y-8A Y-8A Y-7A Y-7A Y-7A Y-7A Y-7B Y-7B Y-7C Y-8A |

PANORAMA









BRONZE & RED—Continued

| | Variety | Description | | Natura vering l | | Price Code |
|-------------------------------|--|---|---|--|--|--|
| 11 WEEK Pinch August 7 | YGA Bronze Etud Beauregard Supreme Bronze Jubilation Thelma Ranger Tan Vedova Valentine YGA Rebel (June ' Legal Tender YGA Cardinal Rusticon Ambercon Olnura Festival Rubaiyat | (June '61) True copper bronze sport from Jubilation. ger (June '61) Red bronze sport from Ranger. e (June '61) Light bronze sport from Etude. e Sport selection from Beauregard. Large rosewood bronze sport of Jubilation. Brilliant orange scarlet pompon. Intermediate true orange pompon. Light bronze sport of Vedova. Large red decorative. '61) Intense red daisy. Intermediate bronze decorative. Intermediate intense crimson red pompon. Intermediate rust red pompon. Intermediate warm amber bronze pompon. Large apricot buff anemone. Intermediate red single. Intermediate velvety red formal pompon. Intermediate brick red anemone. | | Nov. Nov. Nov. Nov. Nov. Nov. Nov. Nov. | 15 15 15 15 15 15 15 20 20 20 20 20 22 22 23 23 | Y-8A Y-8A Y-6C Y-8A Y-6B Y-8A Y-7A Y-7A Y-7A Y-7A Y-8A Y-8A Y-8A Y-8A Y-6B Y-7A |
| 12 WEEK PINCH AUGUST 14 | Bronze Goldsmith Indian Head Apricot Valencia Crimson Valencia Galaxy Red Galaxy Holiday | e '61) Bright red intermediate pompon Intermediate red pompon Large amber bronze decorative Intense red bronze single Large apricot bronze single Large maroon red single Intermediate bright orange single Intermediate scarlet red single Intermediate red single Intermediate red single Intermediate warm reddish bronze daisy | | Nov. 2 Nov. 2 Nov. 2 Nov. 2 Nov. 2 Dec. Dec. Dec. Dec. | 25 25 28 28 28 1 1 | Y-8A Y-7B Y-7C Y-8A Y-7B Y-8A Y-6D Y-7B Y-8A Y-7A |
| 13 WEEK PINCH AUGUST 21 | Christmas Star. Bronze Minstrel. Dk. Br. Minstrel. Red Minstrel | Large red pompon Intermediate crimson red decorative Intermediate red single Intermediate coral red pompon Reddish bronze sport of Bronze Minstrel Crimson red sport of Bronze Minstrel Intermediate reddish bronze pompon | • | Dec. 1 Dec. 1 Dec. 1 Dec. 1 Dec. 1 Dec. 1 | 0 2 3 3 | Y-7C Y-7C Y-7A Y-8A Y-7C Y-8A Y-8A |
| 14 WEEK PINCH AUGUST 28 | Illini Homespun Merrymaker Poinsettia | Large bright amber bronze decorative. Large red decorative. Intermediate bright tomato red single. Intermediate red single. Large scarlet red daisy. ell. (June '61) Brilliant golden bronze pompon. | | Dec. 1 Dec. 2 Dec. 2 Dec. 2 Dec. 2 Dec. 2 | 5 0 0 | Y-8A Y-6D Y-8A Y-7A Y-6D Y-8A |

REBEL

DRAGON



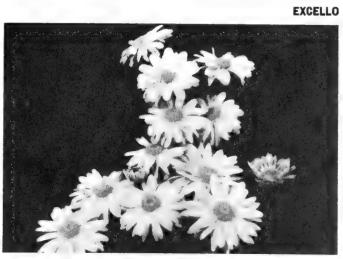




| PINK | | er e | the second of the second of the second | |
|------------------------------|--|--|---|--|
| | Variety | Description | Natural Flowering Date | Price Code |
| 8 WEEK PINCH JULY 17 | Accolade Jewell Mirth | Intermediate deep pink pompon Intermediate light orchid pink pompon Intermediate carnation pink decorative Small lavender pink formal pompon Intermediate pink single Intermediate lavender pink pompon | Oct. 15 Oct. 15 Oct. 15 | Y-7D Y-8A Y-7C Y-7D Y-8A Y-7D |
| 9 WEEK PINCH JULY 24 | Pink Dot Pearl Chip (June '61) Bluechip Pinkchip Peach Chip Darkchip Cherrychip YGA Handsome Lillian Doty | Small dark pompon Productive deep pink single Small pink pompon Luminous shell pink or appleblossom sport Intermediate luminous pink decorative Intermediate light pink decorative Intermediate bright peach pink decorative Intermediate dark lavender pink decorative Intermediate rose pink decorative Intermediate lavender pink decorative Intermediate lavender pink decorative Intermediate lavender pink decorative Intermediate deep pink decorative | Oct. 25 Oct. 25 Nov. 1 | Y-7A Y-6B Y-7A Y-8A Y-5C Y-7A Y-5C Y-7C Y-7D Y-8A Y-7A Y-8A |
| 10 WEEK PINCH JULY 31 | YGA Overture YGA Bluebird Portrait Pink Portrait Profile Criterion Bonnie Pennant Pandora Scintillation Linda Lou Humdinger YGA Excello Masterpiece Rose Masterpiece | Intermediate shell pink decorative. Intermediate pink duplex daisy Large luminous pink pompon Large pink decorative disbud Large lavender pink pompon Light pink sport from Portrait Large lively deep pink pompon Large pink decorative Intermediate pink pompon Intermediate deep pink pompon Large luminous pink decorative Intermediate deep pink pompon Large luminous pink decorative Intermediate deep pink pompon Intermediate light lavender pink anemone Large violet purple formal pompon Intermediate pink daisy Intermediate lavender pink pompon Intermediate light lavender pink pompon Intermediate light lavender pink pompon Intermediate light lavender pink pompon Intermediate lavender pink pompon | Nov. 5 Nov. 5 Nov. 8 Nov. 8 Nov. 8 Nov. 8 Nov. 10 | Y-6C Y-8A Y-8A Y-6C Y-8A Y-6C Y-8A Y-6C Y-8A Y-7C Y-7C Y-7C Y-7C Y-7C |
| 11 WEEK PINCH AUGUST 7 | Taffeta. Jubilation. Pink Jubilation (June '61) Rose Jubilation (June '61) Illini Springtime. Vedova. YGA Staccato. Grand Slam. YGA Delmarvel (June '61) YGA Signet (June '61) Almega. | . Two tone pink pompon . Large Masterpiece pink pompon . Smooth, glistening light pink sport . Bright rose pink sport of Jubilation . Intermediate pink single . Extra large Valencia sized anemone . Intermediate lavender pink formal pompon . Brilliant silvery pink daisy . Intermediate pink pompon . Intermediate pink anemone . Large silvery pink pompon . Extra large lavender pink anemone | Nov. 15 Nov. 15 Nov. 15 Nov. 15 Nov. 15 Nov. 15 Nov. 20 Nov. 20 Nov. 20 | Y-6D Y-7C Y-8A Y-8A Y-7D Y-7A Y-7D Y-7D Y-8A Y-8A Y-7B Y-7A |

SIGNET







| | Variety Description | | Natural Flowering Date | Price Code |
|------------------------------|--|---|---|--|
| 11 WEEK PINCH AUGUST 7 | YGA Blue Skies | Small true pink pompon Large Portrait pink pompon Intermediate lavender pink pompon Intermediate shell pink decorative | Nov. 23 | Y-7C Y-8A Y-8A Y-8A |
| 12 WEEK PINCH AUGUST 14 | YGA Legend Delmar Beautiful Lady YGA Splendor YGA Royal Valencia Dark Valencia | Intermediate Portrait pink pompon Intermediate true lavender pink formal pompon Intermediate light lavender pink pompon Large pink anemone Large luminous shell pink decorative pompon Medium to large deep pink decorative Large light lavender pink single Large lavender pink single Intermediate intensified Delmar pink pompon | Nov. 25 Nov. 25 Nov. 25 Nov. 25 Nov. 25 Nov. 25 Nov. 28 Nov. 28 | Y-8A Y-6B Y-6D Y-8A Y-8A Y-7A Y-7B Y-8A |
| 13 WEEK PINCH AUGUST 21 | Enchantress | Intermediate bright lavender pink daisy Large lavender pink disspray anemone Light pink sport from Snowdrop Intermediate pink single Intermediate lavender pink pompon Clear deep mulberry shade of Minstrel Intermediate pink formal pompon | Dec. 5 Dec. 8 Dec. 10 Dec. 13 Dec. 13 | Y-8A Y-7A Y-7D Y-6D Y-7A Y-7C Y-7C |
| 14 WEEK PINCH AUGUST 28 | Dark Alvoda Riviera Medallion | . Large smooth Portrait pink decorative | Dec. 15 Dec. 20 | Y-6C Y-8A Y-7C Y-7B Y-6D |

CARDINAL

OVERTURE





ALABASTER

SPLENDOR









EARLY VARIETIES FOR SPRING POTS AND GARDENS

| WHITE | | | Control of the Contro | 4 |
|----------|--|--|--|--|
| | Variety | Description | Natural Flowering Date | Price Code |
| 7 WEEK | Larry Chris. Columbus Jessamine Williams. YGA Diamond. | White duplex pompon Intermediate paper white pompon Intermediate paper white pompon Intermediate cream decorative White spoon decorative Intermediate white pompon White decorative | Sept. 25 Oct. 1 Oct. 1 Oct. 1 | Y-7A Y-7C Y-7C Y-8A Y-8A Y-8A Y-8A |
| 8 WEEK | Citita, | Large ivory white quill type spider Intermediate ivory white pompon Large white decorative | Oct 15 | Y-8A Y-8A Y-8A |
| YELLOW | | | | |
| 7 WEEK | Yel. Chris. Columbu YGA Gay Blade Astoria Charles Nye Yellow Spoon Kings Ransom | Golden yellow pompon Light yellow pompon Intermediate lemon yellow decorative Bright Yellow miniature spider Yellow Pompon Yellow Pompon Yellow spoon single Intermediate golden yellow decorative Large lemon yellow pompon | Sept. 25 Oct. 1 Oct. 1 Oct. 5 Oct. 5 | Y-7B Y-7D Y-8A Y-8A Y-7C Y-8A Y-8A Y-8A |
| 8 WEEK | Peking | Intermediate primrose yellow decorative | Oct. 15 | Y-8A |
| BRONZE & | RED | | | |
| 7 WEEK | Champion Cushion. Mahogany Cushion. Lipstick | Small coral bronze pompon Small rust bronze pompon Red duplex pompon Deep bronze pompon Jasper red pompon Small burgundy red cushion pompon Carmine red pompon Deep red daisy Intermediate golden bronze spoon Intermediate orange bronze decorative | Sept. 20 Sept. 25 Sept. 25 Sept. 25 Oct. 5 Oct. 5 Oct. 10 | Y-8A Y-8A Y-7D Y-7D Y-8A Y-8A Y-8A Y-8A |
| 8 WEEK | Cheyenne | Large bright red decorative Intermediate red decorative Large intense apricot bronze decorative Red spoon Small bronze incurved disbud | Oct. 15 | Y-8A Y-8A Y-8A Y-8A Y-8A |

DIAMOND

GAY BLADE







EARLY VARIETIES FOR SPRING POTS AND GARDENS

| | Variety | Description | Natural Flowering Date | Price |
|--------|---|---|--|--|
| 7 WEEK | Purple Waters Major Cushion Spellbound Cecelia Ann Ladygo Mischief Joybringer YGA Raspberry Ice Alert No. 2 Fuchsia Fairy | Small coral pink pompon Intermediate deep purple pompon Pink duplex pompon Lavender decorative Intermediate deep pink decorative Small bright pink anemone Dark purple daisy Salmon rose pompon Small raspberry pink pompon Intermediate purple decorative Small deep pink decorative Pink decorative | Sept. 25 Sept. 25 Oct. 1 Oct. 1 Oct. 5 Oct. 10 Oct. 10 Oct. 10 Oct. 10 Oct. 14 Oct. 14 | Y-8A Y-7D Y-8A Y-7E Y-8A Y-8A Y-8A Y-8A Y-8A Y-8A |

MESABI



MINNEHAHA



PURPLE WATERS



JOAN-ETTE







VARIETIES FOR YEAR-ROUND POTS

| WHITE | | Stand St. Staffer Specifies and A. Staffer (1964) and Alberta (1975) and Alberta (1976). | * | * .* | `.` |
|---------|---|--|---|----------------------------|--|
| | Variety | Description | Natura Flowering | | Price Code |
| 8 WEEK | Joan-EtteGardenia | Large ivory white quill type spiderLarge white decorative | Oct. | | Y-8A Y-8A |
| 9 WEEK | YGA Quicksilver Granite State YGA Snowclad Queen's Lace Wilson's White Patterson's White Poitevine Supreme | Intermediate white decorative Large pure white decorative White disbud pompon Portrait size paper-white decorative White spider Large paper-white decorative Large white decorative Intermediate white decorative Intermediate incurve, chalk white Small light cream incurve | Oct. Oct. Nov. Nov. Nov. Nov. | 25 | Y-7B Y-6A Y-7D Y-6C Y-6C Y-6D Y-8A Y-8A Y-8A Y-7D |
| 10 WEEK | No. 3 Ind. White White Prince YGA Snow Crystal Oregon Susan Leighton Whiterion YGA Chalk Cliff Pacesetter YGA Ensign YGA White Deluxe YGA Starburst (Ju YGA Ice Follies | Large white standard Large white incurve Intermediate pure white standard Medium ivory white spider Large white semi-incurve Large ivory white spider White sport of Criterion Large chalk white decorative Intermediate pure white single Intermediate decorative disbud (June '61) Clear white sport from Pink Deluxe ne '61) Pure white feathered decorative Large chalk white decorative Intermediate pure white anemone | Nov. Nov. Nov. Nov. Nov. Nov. Nov. Nov. | 10 10 10 10 10 | Y-5C Y-5C Y-8A Y-6A Y-5D Y-8A Y-7A Y-7A Y-7A Y-8A Y-8A Y-8A Y-6B Y-6A |
| YELLOW | | | | | |
| 8 WEEK | Peking Blazing Gold | Intermediate primrose yellow decorative Intermediate golden yellow semi-incurve | Oct. | | Y-8A Y-6D |
| 9 WEEK | Georgia. Ohio State Mrs. Wolfe Yellow Lace Gold Lace | Intermediate feathered spider disbud. Intermediate dark yellow incurve. Large intense yellow decorative. Large lemon yellow incurve. Lemon yellow spider. Golden yellow spider. Ow. Color intensification of Wilson's Yellow. | Oct. Oct. Nov. Nov. | 25 | Y-6D Y-8A Y-8A Y-8A Y-7B Y-6C Y-8A |
| 10 WEEK | Indianapolis Yellow. Indianapolis Gold Dark Ind. Yellow YGA Yellow Crystal YGA Golden Cryst | Light golden yellow selection of Ind. Yellow Large lemon yellow incurve Large golden yellow incurved standard Deep lemon yellow Medium lemon yellow spider Deep golden yellow sport from Snow Crystal Large decorative standard | Nov. Nov. Nov. Nov. | - | Y-5C Y-5C Y-6A Y-7A Y-7A Y-8A Y-7C |

JACKSTRAW









VARIETIES FOR YEAR-ROUND POTS

YELLOW—Continued Price Natural Variety Description Flowering Date Code Oregon Trail.....Large light yellow semi-incurve... Nov. Oregon Trail Large light yellow semi-incurve YGA Luminary Intermediate yellow disbud, decorative form YGA Jackstraw Large deep yellow feathered decorative Yellow Prince Intermediate yellow incurve Yellow Leighton Large lemon yellow delicate spider Yellow Delaware Large golden yellow incurve Gol. Yel. Princess Anne Large sulfur yellow decorative standard Cream Yel. Princess Anne Large cream yellow decorative standard Vellow Pacesetter Lemon yellow single Y-7D Y-8A Nov. Nov. Y-8A Nov. Nov. **Y-8A** 10 WEEK Nov. Nov. 10 Nov. 10 Yellow Pacesetter ... Large cream yellow decorative standard ... Yellow Pacesetter ... Lemon yellow single YGA Scepter Large deep golden yellow decorative YGA Yellow Deluxe ... Bright clear lemon yellow Nov. 10 Nov. 10 Y-8A Y-8A 11 WEEK Y-5C **BRONZE & RED** Resolute Large reddish bronze pompon Mrs. Palmero Medium maroon red semi-incurved standard Bronze Palmero Medium coral bronze semi-incurve Alex Colson Large vivid bronze decorative Royal Bronze Intense bronze decorative. Pot disbud Y-8A Oct. 28 Y-8A Y-8A 9 WEEK Oct. 28 Y-8A Nov. Nov. Apricot Princess Anne. (June '61) Large decorative standard. Indianapolis Bronze Large bronze incurve. Dk. Ind. Bronze Dark reddish bronze sport. Bronze Prince Intermediate bronze incurve. Red Star Large red to reddish bronze decorative. Vulcan Large crimson red decorative. Sandrock Small light bronze formal standard. Delaware Large reddish bronze semi-incurved standard. Incurved Delaware Large reddish bronze tightly incurved standard. Fujii Delaware Large Fujii formed standard. Golden Gate Large golden bronze decorative standard. Bronze Princess Anne Large amber bronze decorative standard. Woking Scarlet Large brilliant scarlet bronze decorative standard. YGA Bronze Deluxe Large light bronze sport of Pink Deluxe. Copperhead Large coppery bronze decorative. Nov. 10 Nov. Y-5C Y-5C Nov. Nov. Y-8A Y-6D Nov. Nov. **Y-8A** Nov. Y-5C Y-7B Nov. 10 WEEK Nov. Nov. Nov. 10 Nov. 10 Nov. 10 Nov. 10 Nov. 10 Nov. 11 Nov. 11 Nov. 15 Nov. 15 Nov. 20 11 WEEK Nov. 20 Nov. 20 Clipper Large bronze red incurve, light bronze reverse Nov. 20

SPLURGE











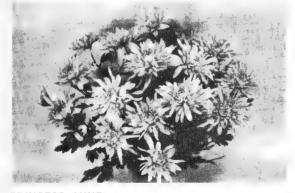
VARIETIES FOR YEAR-ROUND POTS

PINK

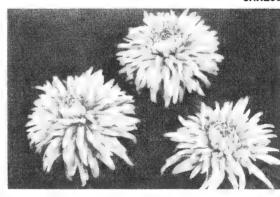
| | Variety | Description | Natural Flowering Dat | Price e Code |
|---------|---|---|--|--|
| 9 WEEK | YGA Handsome YGA Glamour Blue Ribbon Dark Ribbon Pink Ribbon Bridesmaid | Tightly incurved lavender pink standard. Intermediate lavender pink decorative pompon. Intermediate lavender pink formal pompon. Small bright lavender pink incurve. Small deep pink incurved sport of Blue Ribbon. Light lavender pink incurved standard. Large light lavender pink spider. Small pink incurve. | Nov. 1 Nov. 1 Nov. 1 Nov. 1 | Y-8A Y-8A Y-6B Y-7A Y-8A Y-6B Y-7C |
| 10 WEEK | Indianapolis Pink J. W. Prince YGA Mermaid Portrait Pink Portrait Profile Criterion YGA Caress Princess Anne YGA Frolic Personality Humdinger YGA Pink Deluxe | Large deep lavender pink incurved standard Large pink incurve Intermediate lavender pink incurve Intermediate lavender pink pompon Large lavender pink pompon Large lavender pink pompon Light pink pompon sport of Portrait Large lively deep pink pompon Large pink decorative Large pink decorative Large salmon pink decorative standard Intermediate bright lavender pink pompon Large luminous-pink incurved pompon Large luminous violet purple formal pompon Medium to large lavender pink disbud Medium rose pink semi-incurved standard | Nov. 5 Nov. 5 Nov. 8 Nov. 8 Nov. 8 Nov. 10 Nov. 10 Nov. 10 Nov. 10 Nov. 10 | Y-7D Y-5C Y-8A Y-5D Y-6A Y-6C Y-8A Y-6C Y-6C Y-6B Y-6C Y-6B Y-6C |
| 11 WEEK | YGA Blue Ridge VedovaCalvert's Pink Venoya | Medium luminous-pink anemone Intermediate bright pink anemone Huge pink decorative Extra large pastel lavender pink anemone Intermediate orchid pink incurve Extra large lavender pink anemone Intermediate lavender pink pompon | Nov. 15 Nov. 15 Nov. 15 Nov. 17 Nov. 22 | Y-8A Y-8A Y-8A Y-7A Y-7C Y-7A Y-8A |

BLUE RIDGE

CARESS

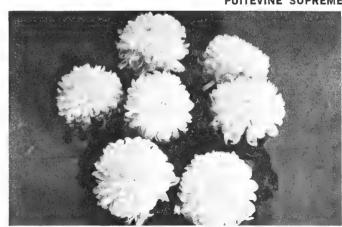


PRINCESS ANNE



POITEVINE SUPREME







NEW GARDEN LISTINGS FOR 1961

* Useful as a Garden Pot Plant

| Minnbronze |
|--|
| A deep bronze sport of Minnpink. September 25. Price |
| Moonlight Spoon |
| A large early soft yellow spoon that grows in a bushy clump September 20. Price |
| Prairie Moon |
| Large double creamy white with excellent substance and strong vigorous plant habit. September 16. Price8A |
| Premier |
| Bright yellow 3 to $3\frac{1}{2}$ " fully double ball shaped flowers supported by sturdy stems. Mid September. Price8A |
| *Ruby Mound |
| New wiry bright deep ruby red with cushion type growth. Flowers resist fading. A fine new red cushion that rivals Lipstick when grown as a spring pot plant. September 22. |
| Price8A |
| Searchlight |
| Tangerine, bronze and orange blooms. Medium in height and abundant in production. Flowering September 28. |
| Price |
| Sparkling |
| 3" decorative of soft rose geranium pink lightly centered with gold. Well formed blooms on stocky medium height plants. October 1. Price |
| |
| Tonka |
| A large flowering deep yellow fully double decorative. September 10. Price |
| |

SPARKLING



MOONLIGHT SPOON





SYMBOLS—(L) Large—(D) Decorative—(P) Pompon—(C) Cushion—(S) Single—(B) Button (C-F) Carnation Flowered—(Sp) Spoon.

* Recommended for spring pot plants pinched and short day treatment same day.

D Varieties recommended as better when disbudded.

Varieties in bold face are new for 1961.

| VARIETY | SIZE AND TYPE | COLOR | HEIGHT | MATURES | PRIC |
|---------------------------|--|--|--|----------------------|------------|
| WHITE | | | | | |
| Osage | (CD) | White | Short | Sept. 5 | 7B |
| Candlelight | (\mathbf{D}) | White | $\mathbf{Med}.$ | Sept. 5 | 7A |
| Paper White | (D) | White | $\mathbf{Med}.$ | Sept. 10 | 6C |
| Crystal Maid | (DP) | Cream | Short | Sept. 12 | 7A |
| Nanook Chris, Columbus | (CD) (LDP) | Cream | Short | Sept. 14 | 7D 8A |
| Wh. Cushion | (LDP) (C) | $egin{array}{c} { m Cream} \\ { m White} \end{array}$ | Tall Short | Sept. 15 Sept. 15 | 7A |
| Gloria | (\mathbf{DP}) | White | Med. | Sept. 15 | 8A |
| Powderpuff | (C) | White | Short | Sept. 15 | 6C |
| Polar Ice | $(\widetilde{\mathbf{D}})$ | White | \mathbf{Med} . | Sept. 15 | 6D |
| Wh. Bounty | (BP) | Cream | Tall | Sept. 15 | 6C |
| Wh. Tower | (LP) | Cream | Tall | Sept. 15 | 6 D |
| Prairie Moon | $(\underline{\mathbf{L}})$ | \mathbf{Cream} | Tall | Sept. 16 | 8A |
| Princess Kay | (D) | White | $\mathbf{Med}.$ | Sept. 20 | 7 D |
| Albaflora | (LD) | White | Med. | Sept. 20 | 7D |
| Benora Granny Lehman | (C) (D) | $egin{array}{c} \mathbf{W}\mathbf{hite} \ \mathbf{W}\mathbf{hite} \end{array}$ | $\begin{array}{c} \textbf{Short} \\ \textbf{Med.} \end{array}$ | Sept. 20 Sept. 20 | 7D 7D |
| White Sail | (D) | White | Med. | Sept. 23 | 7C |
| Wh. Wonder | (\mathbf{LP}) | Ivory | Med. | Sept. 25 | 6D |
| Jessamine Williams | (SP) | White | Med. | Sept. 25 | 8A |
| Shalimar (H) | (LD) | White | Med. | Sept. 25 | 6D |
| Quicksilver (H) | $(\widetilde{\mathbf{L}}\widetilde{\mathbf{D}})$ | Cream | Med. | Sept. 25 | 8A |
| Wh. Rice | (LP) | White | Short | Sept. 25 | 6D |
| Ostosa | (CP) | \mathbf{W} hite | Short | Sept. 25 | 7C |
| Wh. Cloud | $(\underline{\mathbf{D}})$ | White | Tall | Sept. 25 | <u>7</u> A |
| Raggedy Ann | (LĆ) | White | $\mathbf{Med}.$ | Sept. 26 | 7 D |
| Crystal | (P) | White | Tall | Sept. 27 | 7D |
| Judy Mount Hood | (BP) (LD) | $egin{array}{c} \mathbf{W}\mathbf{hite} \ \mathbf{W}\mathbf{hite} \end{array}$ | $\begin{array}{c} \textbf{Short} \\ \textbf{Med.} \end{array}$ | Sept. 27 Sept. 28 | 7D 7D |
| Candleglow | (\mathbf{LD}) | White | Tall | Sept. 28 | 7B |
| North Star | (S) | White | $\overset{1}{\mathbf{M}}\overset{\mathbf{a}}{\mathbf{n}}$ | Sept. 28 | 6D |
| Pepita | (\widetilde{SBP}) | White | \mathbf{Med} . | Sept. 28 | 6D |
| Larry | (P) | White | Short | Oct. 1 | 7D |
| Corsage Cushion | (C) | White | Short | Oct. 1 | 7D |
| Henry Etts | (SP) | White | Tall | Oct. 1 | 7D |
| Gardenia | (LD) | \mathbf{W} hite | $\mathbf{Med.}$ | Oct. 1 | 8A |
| Beth Russel | (\overline{LD}) | Cream | $\mathbf{Med}.$ | Oct. 1 | 7D |
| Grace Bradshaw | (LD) | White | Tall | Oct. 1 | 8A |
| Kansas | (D) | White | Med_{M-1} | Oct. 5 | 7D 7D |
| Mitsie Limelight | (P) (D) | $egin{array}{c} \mathbf{W}\mathbf{hite} \ \mathbf{W}\mathbf{hite} \end{array}$ | $egin{array}{c} \operatorname{Med}. \ \operatorname{Med}. \end{array}$ | Oct. 5 Oct. 6 | 7A |
| Medusa | (D) | White | Med. | Oct. 5 | 8A |
| Hadley | (\mathbf{D}) | Cream | Tall | Oct. 5 | 8A |
| Lyric | (8) | White | Short | Oct. 5 | 7A |
| Avalanche | (S) (LD) | White | Tall | Oct. 5 | 7 D |
| Horizon | (D) | White | $\mathbf{Med}.$ | Oct. 5 | 6D |
| Classic | (P) | White | Tall | Oct. 10 | A8 |
| Minnesota | (\mathbf{LP}) | White | ${f Med}.$ | Oct. 10 | 7C |
| Maestro | (<u>P)</u> | Cream | Short | Oct. 10 | 7 D |
| Albion | (LD) | \mathbf{W} hite | ${f Med}.$ | Oct. 10 | 7B |
| Wh. Masquerade | (B) | White | Med. | Oct. 10 | 7D |
| Wh. Spoon | (SP) | $egin{array}{c} \mathbf{White} \ \mathbf{White} \end{array}$ | $egin{aligned} \mathbf{Med}. \end{aligned}$ | Oct. 10 Oct. 12 | 6D 8A |
| Silverplate | $^{ m (D)}_{ m (LD)}$ | W nite Cream | $egin{array}{c} \mathbf{Med.} \end{array}$ | Oct. 12 | 8A 8A |
| Elmira Michigan State | (LD) | White | \mathbf{Med} . | Oct. 12 | 7C |
| Spartan State | (LD) | White | Tall | Oct. 15 | 8A |
| Pilgrim | (P) | White | $\overset{\text{ran}}{\text{Med}}$. | Oct. 15 | 7C |
| Joan-Ette | (SP) | Ivory | Short | Oct. 15 | 8A |
| Irene | (B) | White | $\mathbf{Med}.$ | Oct. 15 | 7D |
| Blizzard | (\widetilde{P}) | White | $\mathbf{Med}.$ | Oct. 15 | 7B |



| VARIETY | SIZE AND TYPE | COLOR | HEIGHT | MATURES | PRICI |
|---------------------------------|--|--|---|----------------------|------------|
| YELLOW | | | | | |
| Reverence * Early Gold | (LD) | Chamois | Short | Sept. 1 | 7A |
| Golden Hours | (P) (P) | Golden Chrome Yel. | Short | Sept. 5 | 7C |
| Cortis Rice | (\mathbf{L}) | Buttercup Yellow | Med. Tall | Sept. 8 Sept. 10 | 7A 8A |
| Tonka | (LD) | Deep Yellow Brt. Yellow | Tall | Sept. 10 | 8A |
| John Milbrath Gold Button | (LD) | Brt. Yellow | $\mathbf{Med}.$ | Sept. 10 | 7 D |
| Delight (H) | (BP) (P) | Golden Golden | Med. | Sept. 10 | · 7A |
| Genista | (\mathbf{D}) | Canary Yel. | $egin{aligned} \mathbf{Med}. \\ \mathbf{Med}. \end{aligned}$ | Sept. 12 Sept. 12 | 8A 7A |
| Gleam | (P) | Golden Yel. | \mathbf{Med} . | Sept. 15 | 7B |
| Premier Pathfinder | $(\mathbf{L}\mathbf{D})$ | Brt. Yellow | $\mathbf{Med}.$ | Sept. 15 | 8A |
| Pomponette | (D) (P) | Deep Lemon | Med . | Sept. 15 | 7A |
| Yel. Cushion | (D) | Orange Light Yel. | $\begin{array}{c} \mathbf{Short} \\ \mathbf{Short} \end{array}$ | Sept. 15 Sept. 15 | 6C 7B |
| Yel. Chris. Columbus | $(\widetilde{\mathbf{L}}\widetilde{\mathbf{D}})$ | Brt. Lemon | Med. | Sept. 15 | 8A |
| Early Yellow | (B) | Deep Lemon | Short | Sept. 15 | 6C |
| Golden Carpet Glendale | (C) (P) | Golden | Short | Sept. 15 | . 7A |
| O Ming | (P) | Yellow Golden | $egin{array}{l} \mathbf{Med.} \\ \mathbf{Med.} \end{array}$ | Sept. 15 Sept. 18 | 8A 7A |
| Moonlight Spoon | (Sp) (CF) | Soft Yellow | Med. | Sept. 18 | 8A |
| Golden Fantasy | (CF) | Golden | Med. | Sept. 20 | 8A |
| Sept. Sunshine Aglow | (S) | Brt. Lemon | $\mathbf{Med}.$ | Sept. 20 | 6C |
| Sundance | (P) (D) | Orange-Yel. Lemon | \mathbf{Med} . | Sept. 20 | 7D |
| Real Gold | (LD) | Deep Golden | $egin{array}{l} \mathbf{Med.} \\ \mathbf{Med.} \end{array}$ | Sept. 20 Sept. 20 | 8A 7A |
| Canary Wonder | $(\overline{\mathrm{LP}})$ | Canary Yel. | Med. | Sept. 25 | 6D |
| Golden Cushion Golden Wonder | (C) | Golden Yellow | Short | Sept. 25 | 7B |
| Charles Nye | (\mathbf{LP}) (\mathbf{LP}) | Golden | Med . | Sept. 25 | 6D |
| Golden Sunset | $(\mathbf{L}\mathbf{D})$ | Deep Lemon Copper | $egin{array}{c} \mathbf{Tall} \\ \mathbf{Med.} \end{array}$ | Sept. 25 Sept. 25 | 7C 6D |
| Hilite | (D) | $egin{array}{c} 	ext{Copper} \ 	ext{Yellow} \end{array}$ | Tall | Sept. 25 | 8A |
| Honeycomb | (<u>P</u>) | Honey Yel. | $\mathbf{Med}.$ | Sept. 25 | 7A |
| Exeter Moonlight | (D) | Golden | Med. | Sept. 25 | 7 D |
| Lee Powell | (\overline{LD}) (\overline{LD}) | Brt. Yellow Chinese Yel. | Med. Tall | Sept. 25 | 7D |
| Golden Age | (P) | Golden Yel. | Tall | Sept. 25 Sept. 25 | 7D 8A |
| Tangerine | $(\overline{\mathbf{L}}\overline{\mathbf{D}})$ | Deep Orange | \mathbf{Med} . | Sept. 25 | 6D |
| Butterscotch (H) | (D) | Golden Yel. | Tall | Sept. 26 | 7D |
| Astoria Marie Hartman | $(\stackrel{(LD)}{D})$ | Deep Lemon | \mathbf{Med} . | Sept. 28 | 8A |
| Yel. Supreme (H) | (C) | Canary Yel. Brt. Lemon | $egin{array}{c} \mathbf{Med.} \\ \mathbf{Short} \end{array}$ | Sept. 28 Sept. 28 | 7D 6C |
| Milan | (L) | Deep Golden | Tall | Oct. 1 | 8A |
| Ruby Breithaupt | (LD) | Primrose Yel. | $\mathbf{Med}.$ | Oct. 1 | 7C |
| Freya King's Ransom | (LD) (D) | Golden Yel. | \mathbf{Med} . | Oct. 1 | 7A |
| Tranquility | (D) | Golden Yel. Lemon Yel. | $egin{aligned} \mathbf{Med}. \\ \mathbf{Med}. \end{aligned}$ | Oct. 1 Oct. 1 | 8A 7A |
| Chiquita | (B) | Deep Lemon | \mathbf{Med} . | Oct. 1 | 7 D |
| Ethel Waters | (L-INC.) | Lt. Lemon | $\mathbf{Med}.$ | | - 8A |
| Newton Sudan | (L-CACTUS) (LD) | Golden Yel, | \mathbf{Med} . | Oct. 5 | 7B |
| Polaris | (LD) | Yellow Golden Buff | Med. Tall | Oct. 5 | 8A |
| Illinois | (INC.) | Brt. Golden | Med. | Oct. 5 Oct. 5 | 7D 7C |
| Yel. Avalanche | (LD) | Lt. Lemon | Tall | Oct. 5 | 7 D |
| Orion Yel. Spoon | (LD) | Soft Yellow | Short | Oct. 5 | 8A |
| Treasure | (SP) (P) | Lt. Yellow Golden Yel. | Med. | Oct. 10 | 8A |
| Golden Spoon | $(\stackrel{(1)}{\mathrm{SP}})$ | Golden Yel. | Tall Med. | Oct. 10 Oct. 10 | 7D 6D |
| Bright Forecast | (P) | Brt. Lemon | Tall | Oct. 10 | 7C |
| Yel. Calumet (H) Arlora | (P) | Lemon Yel. | $\mathbf{Med}.$ | Oct. 10 | 8A |
| Michigan | (LD) | Brt. Lemon | \mathbf{Med} . | Oct. 10 | 7A |
| Sunburst | (L-CACTUS) | Clear Yel. Golden Yel. | Med. Med. | Oct. 12 | 7C |
| Gold Lode | (L-INC.) | Brt. Yellow | Med. Med. | Oct. 12 Oct. 15 | 7D 6C |
| Judith Anderson | (B) | Brt. Lemon | $\mathbf{Med}.$ | Oct. 15 | 6C |
| Yel. Irene Ohio State (H) | (B) | Lt. Lemon | $\mathbf{Med}.$ | Oct. 15 | 7 D |
| Sarasota | (CACTUS) (P) | Golden Yel. | Med. | Oct. 15 | 8A |
| Iowa | (INC.) | Brt. Lemon Brt. Lemon | Med. Med. | Oct. 15 Oct. 15 | 7A 7C |
| Peking | | | | | |



| VARIETY | SIZE AND TYPE | COLOR | HEIGHT | MATURES | PRICE |
|----------------------------------|--|---|--|----------------------|------------------|
| RONZE & REI | | | | | |
| Vulcan (H) | (D) | Dark Red | Short | Aug. 24 | 7 D |
| Tecumsèh (| (C) | Brick Red | Short | Sept. 2 | 8A |
| Glow Worm | (C) | Or. Scarlet | Short | Sept. 8 | 7A |
| Carly Harvest Iarbinger | (C) (LD) | Mah. Orange | Short | Sept. 8 | 7 <u>C</u> |
| V. P. Snyder | (ED) (P) | Golden Br. Apricot Or. | $\begin{array}{c} \textbf{Short} \\ \textbf{Med.} \end{array}$ | Sept. 8 Sept. 10 | 7B 7C |
| utumn Šong | $(\mathbf{\widetilde{D}})$ | Wine Rose | Med. | Sept. 10 | 7A |
| eo. Luxton | (LD) | Lt. Bronze | $\mathbf{Med}.$ | Sept. 12 | 7A |
| Bronze Gremlin Br. Pomponette | (P) (P) | Deep Bronze Golden Br. | Short | Sept. 15 | 8A |
| arly Crimson | (P) (D) | Brt. Crimson | $\begin{array}{c} \textbf{Short} \\ \textbf{Med.} \end{array}$ | Sept. 15 Sept. 15 | 7B 6C |
| pache | $(\widetilde{\mathbf{L}}\widetilde{\mathbf{D}})$ | Red & Gold | Med. | Sept. 15 | 7A |
| arly Bronze | (B) | Orange Br. | Short | Sept. 15 | 6C |
| ed Gold k. Red Gold | (B) | Red & Gold | Med. | Sept. 15 | 6D |
| ew Marj. Mills | (B) (LP) | Dark Red Ruby | $egin{array}{c} \mathbf{Med.} \\ \mathbf{Short} \end{array}$ | Sept. 15 Sept. 15 | 6D 7D |
| amboyant | (\mathbf{D}) | Orange Br. | Med. | Sept. 15 Sept. 15 | 7D 7A |
| rly Kathleen | (\mathbf{D}) | Coppery Br. | $\mathbf{Med}.$ | Sept. 15 | 7A |
| ompanion utumn Beauty | (D) (D) | Golden Br. | Med_{-1} | Sept. 15 | 7B |
| andy (H) | (D) | Chestnut Red Reddish Br. | $egin{aligned} \mathbf{Med}. \\ \mathbf{Med}. \end{aligned}$ | Sept. 15 Sept. 16 | 7A 6C |
| pt. Bronze | (B) | Golden Br. | Med. | Sept. 20 | 6C |
| pronto | (\mathbf{C}) | Bronze | Short | Sept. 20 | 8A |
| esabi | (P) | Rust Bronze | Short | Sept. 20 | 8A |
| onze Queen (H) | (C) (D) | Copper Br. Golden Br. | $\begin{array}{c} \textbf{Short} \\ \textbf{Med.} \end{array}$ | Sept. 20 | 6D 7D |
| ed Glow | (P) | Dark Red | Med. | Sept. 20 Sept. 20 | 6D |
| sona | (P) | Reddish Br. | $\mathbf{Med}.$ | Sept. 20 | 7A |
| arlet Crimson | (D) | Bright Red | \mathbf{Med} . | Sept. 20 | 6D |
| me. Cadillac Impaigner | (LÝ) (Cactus) | Raspberry Bronze Gold | $\begin{array}{c} \textbf{Short} \\ \textbf{Med.} \end{array}$ | Sept. 20 Sept. 22 | 7A 8A |
| by Mound | (C) | Ruby Red | Short | Sept. 22 | 8A |
| ronze Giant | (LD) | Bronze | Tall | Sept. 22 | 7 D |
| innbronze | (C) | Deep Bronze | Short | Sept. 22 | 8A |
| uge Cushion . Wonder | (C) | Bright Red Bronze | $\begin{array}{c} \textbf{Short} \\ \textbf{Med.} \end{array}$ | Sept. 25 | 7B |
| own Jewell | (P) (D) | Bright Red | Short | Sept. 25 Sept. 25 | 7A 7A |
| amp. Cushion | (C) | Deep Bronze | Short | Sept. 25 | 7D |
| md. Cushion | (C) | Red | Short | Sept. 25 | 7 D |
| hogany Cushion te Cushion | (C) (C) | Red Salmon Br. | Short | Sept. 25 | 7D |
| otball Bronze | (D) | Bronze | Short Tall | Sept. 25 Sept. 25 | 6C 7A |
| wrence Blaney | $\langle \overline{\mathbf{D}} \rangle$ | Orange Red | Med. | Sept. 25 | 7D |
| ojave Gold | (LD) | Golden Br. | Med. | Sept. 26 | 7 C |
| archlight | (P) (D) | Tangerine Door Rod | Med. | Sept. 28 | 8A |
| ark Knight ikado | (LD Cactus) | $egin{array}{c} { m Deep} \ { m Red} \\ { m Red} \end{array}$ | $egin{aligned} \mathbf{Med}. \ \mathbf{Tall} \end{aligned}$ | Sept. 28 Sept. 28 | 7D 7D |
| emembrance | (D) | Dark Carmine | \mathbf{Med} . | Sept. 28 | 8A |
| pstick | (C) | Ruby Orange | Short | Sept. 28 | 8A |
| athleen Lehman | (LĎ) | Orange Br. | Med. | Sept. 28 | 7A |
| uth Scott dmiration | (D) (D) | Golden Br. Salmon | Tall Med. | Sept. 28 Sept. 28 | 7D 6C |
| an Foley | (C) | Or. Scarlet | Med. | Oct. 1 | 7D |
| lorocco | (C) | Reddish Br. | ${f Short}$ | Oct. 1 | 7C |
| aprice | (LD) | Apricot Br. | $\mathbf{Med}.$ | Oct. 1 | 8A |
| on Mountain | (P) (P) | Deep Red Crimson Red | $egin{aligned} \mathbf{Med}. \\ \mathbf{Med}. \end{aligned}$ | Oct. 1 Oct. 1 | 6D 7A |
| ed Riding Hood | (P) (D) | Bright Red | Med. | Oct. 1 | -/ 7A |
| am Williston | (C) | Deep Red | Short | Oct. 1 | 6D |
| eshara | (\mathbf{D}) | Mulberry | $\mathbf{Med}.$ | Oct. 1 | 6C |
| onfire ed Mischief | (D) | Bright Red | Med. | Oct. 1 | 7B |
| ed Mischief Loyalist | (C) (P) (S) (P) | Deep Red Ox-Blood | $egin{array}{c} \mathbf{Short} \\ \mathbf{Med.} \end{array}$ | Oct. 1 Oct. 1 | 8A 7 D |
| ire Engine | (Ŝ) | Flaming Red | Med. | Oct. 1 | 6C |
| intage | (\mathbf{P}) | Claret Red | $\mathbf{Med}.$ | Oct. 1 | 7 D |
| obility | (D) | Deep Red | $\mathbf{Med}.$ | Oct. 4 | 7B |
| Card. Spoon Yrecracker | (SP) | Red Bronze | Med. | Oct. 5 Oct. 5 | 7B |
| ept. Cheer | (D) (S) | Mah. Bronze Cherry Red | Tall Med. | Oct. 5 Oct. 5 | 7A 6D |
| Burgundy | (LP) | Wine Red | Tall | Oct. 5 | 6C |
| Jurgunay | (D) | Wille Trea | Tall | | 7D |



| BRONZE & RED | | | | | |
|---|--|-------------------------------|--|----------------------|------------------|
| | —Continued | | | | |
| Red Velvet | (LD) | Dk. Crimson | Med. | Oct. 5 | 7D |
| Mona | (P) | Rust Bronze | Med. | Oct. 5 | 7D |
| Indian Red | (\mathbf{D}) | Rust | $\mathbf{Med}.$ | Oct. 5 | 7A |
| Courageous Mrs. Dupont | (D) | Ruby Red | Med. | Oct. 5 | 6C |
| Monterey | $(\stackrel{(}{ m L\acute{D}})) \ (\stackrel{(}{ m L-Inc.})$ | Coral Buff | Tall Tall | Oct. 5 Oct. 8 | 7D 8A |
| Araby | (D-1nc.) (D) | Bril. Orange Crimson | Tall | Oct. 8 | 8A |
| Gladiator | $(\widetilde{\mathbf{L}}\widetilde{\mathbf{D}})$ | Orange Red | $\widetilde{\mathrm{Med}}$. | Oct. 10 | 7A |
| Calumet (H) | (LD) | Apricot | $\mathbf{Med}.$ | Oct. 10 | 7C |
| Nina Rebman | (\mathbf{P}) | Dark Red | $\mathbf{Med}.$ | Oct. 10 | 7 D |
| Dk. Calumet (H) Remember Me | (D) | Bronze | \mathbf{Med} . | Oct. 10 | 7D |
| Dolli-Ette | (SP) (SP) | Red & Bronze Golden Br. | $egin{array}{c} \mathbf{Tall} \\ \mathbf{Med}. \end{array}$ | Oct. 10 Oct. 10 | 7 B 8A |
| Huntsman | (LD) | Scarlet Or. | Tall | Oct. 10 | 6D |
| Carnival | (P) | Burnt Orange | \mathbf{Med} . | Oct. 10 | 8A |
| Carmine Queen | (\mathbf{P}) | Carmine Red | Tall | Oct. 10 | 8A |
| Indiana | (Cactus) | Bronze | $\mathbf{Med}.$ | Oct. 10 | 7C |
| Admiral | (<u>P</u>) | Dark Red | $\mathbf{Med}.$ | Oct. 12 | 7A |
| Purdue (H) James Stewart | (Inc.) | Bronze | Med . | Oct. 12 | 7C |
| Flaming Pillar | (P) (L) | Apricot Gold Brilliant Red | Tall | Oct. 14 | 7D |
| Radiance | (\mathbf{D}) | Red | Tall Med. | Oct. 14 Oct. 15 | 8A 8A |
| Cheyenne | (LD) | Bright Red | Short | Oct. 15 | 8A |
| Majestic | (Inc.) | Bronze | Med. | Oct. 15 | 8A |
| Resolute | (\mathbf{D}) | Bright Red | Med. | Oct. 15 | 8A |
| Wisconsin | (Inc.) | Apricot Br. | $\mathbf{Med}.$ | Oct. 15 | 7C |
| Rajah Helma | (S) (D) | Scarlet Red Rich Red | Tall Med. | Oct. 15 | 8A 7B |
| INK & LAVEN | | | | | |
| Wenonah | (P) | Soft Lavender | $\mathbf{Med}.$ | Aug. 24 | 7 D |
| Gladness | (DP) | China Rose | Short | Aug. 28 | 7A |
| Cecil Beed | (\mathbf{D}) | Deep Lav. | $\mathbf{Med}.$ | Sept. 1 | 6C |
| Salmon Precose | (LD) | Sal. Pink | Short | Sept. 1 | 7B |
| Amelia Dean Kay | (C) (C) | Lay, Pink | Short | Sept. 5 | 6C |
| Purple Star | (DP) | Shell Pink Bril, Purple | $egin{array}{c} \mathbf{Short} \\ \mathbf{Med.} \end{array}$ | Sept. 5 Sept. 5 | 6C 7B |
| Joan Helen | (\mathbf{D}) | Dk. Purple | Med. | Sept. 5 Sept. 10 | · 6C |
| Nye's Favorite | (LD) | Lavender | \mathbf{Med} . | Sept. 10 | 6D |
| Orchid Helen | (D) | Orchid Lav. | Med. | Sept. 10 | 7A |
| Princess (H) | (D) · | Peach to Rose Pink | $\mathbf{Med}.$ | Sept. 15 | 7 D |
| Royal Robe | (D) | Dk. Purple | \mathbf{Med} . | Sept. 15 | 7A |
| Tensleep Chippewa | (C) (D) | Rose Pink | Med_{-1} | Sept. 15 | 8A |
| Purple Spoon | (SP) | Brt. Purple Soft Purple | $egin{aligned} \mathbf{Med.} \\ \mathbf{Med.} \end{aligned}$ | Sept. 15 Sept. 20 | 6D 7A |
| Minnpink | (C) | Rose Pink | Short | Sept. 20 | 8A |
| Purple Waters | (\mathbf{D}) | Deep Purple | Med. | Sept. 20 | 8A |
| Minnehaha | (<u>C)</u> | Rosy Pink | Short | Sept. 20 | A8 |
| Alert | (LD) | Dark Purple | $\mathbf{Med}.$ | Sept. 20 | 8A |
| Blanche Litwiller | (LP) | Lav. Pink | Med . | Sept. 23 | 7C 7C |
| Pink Quill Olive Longland | (\overline{LD}) (\overline{D}) | Shell Pink Salmon Pink | $egin{array}{l} \mathbf{Med.} \\ \mathbf{Med.} \end{array}$ | Sept. 25 | 6C |
| Evangeline | (LD) | Flesh Pink | Tall | Sept. 25 Sept. 25 | 7A |
| Jeweltone | (P) | Rose Pink | Short | Sept. 25 | 7A |
| Lady's Choice | (LD) | Ivory Pink | $\mathbf{Med}.$ | Sept. 25 | 7A |
| Reflection | (\mathbf{D}) | Rosy Lav. | $\mathbf{Med}.$ | Sept. 25 | 7A |
| Petrisian Rose | (P) | Lav. Rose | Med. | Sept. 25 | 6D |
| Cecelia Imp. Early Wonder | (D) (P) | Purple Lay. Pink | Short | Sept. 25 | 8A 6D |
| Spellbound | (P) (D) | Bril. Lavender | Med. Med. | Sept. 25 Sept. 25 | 8A |
| Capt. J. Smith | (C) | Lav. Pink | Short | Sept. 25 | 6C |
| Evelyn Devaney | $(\widetilde{\mathbf{D}})$ | Shell Pink | Med. | Sept. 25 | 7A |
| Purple Cushion | (C) | Deep Purple | \mathbf{Med} . | Sept. 25 | 6C |
| Major Cushion | (\mathbf{D}) | Lavender | Short | Sept. 25 | 7 D |
| Coquette | (C) | Rosy Pink | Short | Sept. 25 | 7A |
| | (SP) | Lav. Pink | Short | Sept. 26 | 7 D |
| | (gn) | Clarentin Dini | | 0 1 00 | |
| Pink Spoon Cushion Loveliness Purple Dusk | (SP) (C) | Carmine Pink Lt. Purple | Med. Med. | Sept. 26 Sept. 26 | 7D 7D |



| VARIETY | SIZE AND TYPE | COLOR | HEIGHT | MATURES | PRIC |
|---------------------|--|-------------------------|------------------------------|--------------------|------------------|
| PINK & LAVENI | DER—Continu | ued | | | |
| Betty | (D) | Pink Rose | Tall | Sept. 28 | 6C |
| * Twinkle | (C) | Deep Rose | Med . | Sept. 28 | 6C |
| Pat Lehman | (D) | Peach Pink | Tall | Sept. 28 | 7A |
| Stylish | (Cactus) | Old Rose | Med . | Sept. 28 | 7 C |
| Champagne | (\mathbf{D}) | Shell Pink | Tall | Sept. 28 | 7D |
| Artist's Delight | (\mathbf{D}) | Coral Pink | $\mathbf{Med}.$ | Sept. 29 | . 7C |
| Sparkling | (LD) | Rose Pink | Med . | Oct. 1 | 8A |
| Lady Fair | (Cactus) | Orch. Pink | Med . | Oct. 1 | 7D |
| Old Lavender | (LD) | Brt. Lavender | Med . | Oct. 1 | 7B |
| Helen Bogue | (LD) | ${f Rose}$ Purple | Tall | Oct. 1 | 7C |
| * Mischief | (S) (P) | Purple | Short | Oct. 1 | 8A |
| Ali Baba | (P) | Purple | $\mathbf{Med}.$ | Oct. 5 | 8A |
| Northern Queen | $(\overline{\mathrm{LD}})$ | Rose Pink | $\mathbf{Med}.$ | Oct. 5 | 7A |
| Josephine Ferris | (P) (D) | Pink | $\underline{\mathbf{Med}}$. | Oct. 5 | 7D |
| * Lavender Lady | (D) | Lavender | Tall | Oct. 5 | 7A |
| * Ann Ladygo | (C) | Med. Pink | \mathbf{Short} | Oct. 5 | 7B |
| Betty Etts | $\stackrel{(\stackrel{\smile}{\mathrm{Sp}})}{(\mathrm{LD})}$ | Orchid Pink | $\underline{\mathbf{Med}}.$ | Oct. 10 | 70 |
| Trevania | (LD) | Coral Peach | Tall | Oct. 10 | 70 |
| * Orchid Spoon | (Sp) | Orchid | $\mathbf{Med}.$ | Oct. 10 | 6E |
| Rose Spoon | $(\stackrel{\hbox{\scriptsize (Sp)}}{(\hbox{\scriptsize (Sp)}})$ | Rose Pink | $\mathbf{Med}.$ | Oct. 10 | 6E |
| Lassie | (LD) | Deep Pink | Med . | Oct. 10 | 7A |
| * Melrose | (LD) | Peach Pink | Tall | Oct. 10 | 70 |
| * Masquerade | (B) | Lavender | $\mathbf{Med}.$ | Oct. 10 | 60 |
| * Joybringer | $(\underline{\mathbf{D}})$ | Lav. Rose | Short | Oct. 10 Oct. 12 | 8 <i>A</i> 70 |
| * Accolade | (P) | Lav. Pink | Tall | | 7 A |
| Allegro | (C)_ | Shrimp Pink | $\mathbf{Med}.$ | | 75 |
| Evelyn Garren | (L-Inc.) | Rose & Gold | Med . | Oct. 12 | 8/ |
| * Fuchsia Fairy | $(\underline{\mathbf{D}})$ | Light Pink | Short | Oct. 14 | |
| No. 2 Fuchsia Fairy | (\mathbf{D}) | Deeper Pink Sport | Short | Oct. 14 Oct. 15 | 8 <i>A</i> 70 |
| Cupid | (\mathbf{D}) | Pink | Med . | | 7 L 7 C |
| * Jewell | (\overline{B}) | Lavender | Med . | Oct. 15 | 7 L 7 E |
| Enterprise | $(\overline{\mathbf{P}})$ | Amaranth Rose | Tall | Oct. 15 | 8/ |
| Elizabeth Hood | (\mathbf{D}) | Lt. Lavender | Med . | Oct. 15 | 8A |
| Royal Ette | (\mathbf{Sp}) | Lavender Pink | ${f Short}$ | Oct. 15 | 87 |

CHRYSANTHEMUM CUTTINGS PRICE LIST Effective January 1, 1961

The list price for each variety is indicated by a price symbol that appears with the variety name in the flowering program charts.

| | | PRICE PER 100 CUTTINGS | | | GS |
|------------|---------|------------------------|---------|---------|-----------|
| SYMBOL | 50 ONLY | 100-250 | 300-450 | 500-950 | 1000 & UP |
| 5 C | 3.25 | 6.25 | 6.00 | 5.75 | 5.50 |
| 5D | 3.38 | 6.50 | 6.25 | 6.00 | 5.75 |
| 6 A | 3.50 | 6.75 | 6.50 | 6.25 | 6.00 |
| 6 B | 3.63 | 7.00 | 6.75 | 6.50 | 6.25 |
| 6C | 3.75 | 7.25 | 7.00 | 6.75 | 6.50 |
| 6 D | 3.88 | 7.50 | 7.25 | 7.00 | 6.75 |
| 7 A | 4.00 | 7.75 | 7.50 | 7.25 | 7.00 |
| 7 B | 4.13 | 8.00 | 7.75 | 7.50 | 7.25 |
| 7 C | 4.25 | 8.25 | 8.00 | 7.75 | 7.50 |
| 7 D | 4.38 | 8.50 | 8.25 | 8.00 | 7.75 |
| 8 A | 4.50 | 8.75 | 8.50 | 8.25 | 8.00 |



GARDEN VARIETIES COLLECTIONS

COLLECTION PRICES PER 100

| 300-450 | 500-950 | 1000 & UP |
|---------|---------|-----------|
| 6.25 | 6.00 | 5.75 |

For growers who are not familiar with Garden Varieties, but who wish a well balanced assortment, we offer the following collections which include the better varieties for each specific purpose.

COLLECTION No. 1

Taller varieties for cut flowers.

COLLECTION No. 2

Varieties for bedding or borders.

COLLECTION No. 3

50% for Cut Flowers. 50% for Bedding or Borders.

COLLECTION No. 4

Varieties suitable for Easter, Mother's Day or Memorial Day pots.

COLLECTION No. 5

Cushion varieties only.

COLLECTION No. 6

Greenhouse Standards.

COLLECTION No. 7

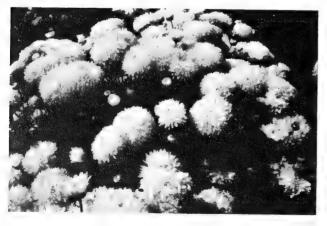
Greenhouse Pompons.

COLLECTION No. 8

Greenhouse Pot Plant varieties.

ABOVE COLLECTION PRICES APPLY TO GARDEN VARIETIES ONLY PAGES 125-129

PREMIER



CAMPAIGNER





INSECTICIDES

- Aramite 15W—Used to control Red Spider Mites. 4 lb. bag \$3.25 Case—12 x 4 lb. bags \$35.00
- Aramite Liquid 2E—Red Spider Mite control. 1 gallon \$13.00
- Chlorobenzilate 25W-For control of Spider 4 lb. bag \$5.25 Case—12 x 4 lb. bags \$53.50
- D. D. T. 50W—General purpose. For most leaf eating, chewing insects, soil pests, thrips, white
- 4 lb. bag \$1.55 Case—12 x 4 lb. bags \$16.50 Endrin 1.6 lb. Liquid-Excellent for control of Cyclamen Mite, Aphids, Thrips, etc. 1 gallon \$12.50 4 gallons \$10.40 per gal. 1 gallon \$12.50
- Kelthane W-For control of both Cyclamen and Red Spider Mites.
- 4 lb. bag \$5.50 Case—12 x 4 lb. bags \$60.00 Kelthane 18.5 Liquid—Red Spider Mite control. 1 gal. \$11.00 Case—4 x 1 gal. cans \$10.25 per gal.
- Lindane 25W—For Aphids, Thrips, Leafhoppers, Spittle-bugs, Symphylids.
 4 lb. bag \$7.00 Case—12 x 4 lb. bags \$78.00
- Lindane $1\frac{1}{2}\%$ —50 lb. bag \$11.75.
- Malathion 25W—For Spider Mites, Aphids, Thrip, Scales, Leafhoppers and Rollers, Mealy Bugs, Caterpillars, Beetles, White Flies and Tarnished plant bugs. 4 lb. bag \$2.75 Case—12 x 4 lb. bags \$28.70
- Malathion Liquid 5-E-1 gallon \$11.50.
- Nico Fume Liquid—To control Aphids, Thrips, Chrysanthemum Leaf Minor and Marguerite Fly. 1 gallon can \$16.25
- Parathion 15W-To control Aphids, Spider Mites, Caterpillars, Leaf Rollers, Thrips, Beetles, Mealey Bugs, White Flies and Rose Midge. 3 lb. bag \$1.75 Case—16 x 3 lb. bags \$25.00

- P-40 (2% Sodium Selenate)—For chewing and sucking insects on plants other than edible crops Food crops not to be grown in treated area for 12
- 25 lbs. \$12.50 50 lbs. **\$22.50** Sodium Selenate (Pure)—For control of Aphids, Red Spider, Cyclamen Mites and some Nematode.

 4 oz. \$4.00 1 lb. \$12.50
- Slugit-Liquid Metaldehyde solution for control of snails and slugs. 1 gallon \$12.00
- Systox—A systematic insecticide for control of Foliar Nematode, Aphids and Spider Mites. (For soil application only.) 1 gallon \$30.75
- Tedion 25—For control of Red Spider Mites. 2 lb. bag \$4.00 Case—12 x 2 lb. bags \$44.75
- Tedion 90—For resistant Spider Mites. (Can combine with Aramite for highly resistant mites.) 1 lb. bag \$7.20 Case—12 x 1 lb. bags \$78.00
- Thiodan Emulsion—For control of Aphids, White Fly and Cyclamen Mites. 1 gallon \$10.00
- Thiodan 50W 2 lb. bag \$4.75 Case—12 x 2 lb. bags \$52.00
- Trithion 25W-Two spotted Spider Mites, Monterey Pine Aphids, Rose Aphids, and soft scale insects. 5 lb. bag \$5.45
- Vapatone XX Emulsive—For control of Aphids, Thrips, Red Spider and Leaf Hopper Nymphs. 1 gallon \$12.00
- Spreader Sticker-For use with Agricultural 1 gallon \$7.95

FUMIGATORS

- Fulex Parathion Fumigator—For Red Spider, Aphids and Thrip. Carton—24 cans 2,000 cu. ft. \$11.50 10,000 cu. ft. \$17.00 5,000 cu. ft. \$14.50 20,000 cu. ft. \$26.00
- Fulex Aphid Smoke Fumigator—For Aphid and adult White Fly. Carton—24 cans 2,000 cu. ft. \$11.00 10.000 cu. ft. \$17.00 5,000 cu. ft. \$14.00 20,000 cu. ft. \$25.00
- Fulex Spider Mite Fumigator-For Red Spider including some parathion resistant strains on
- Carnations, Chrysanthemums and Snaps.

 Carton—24 cans
 2,000 cu. ft. \$11.50 10,000 cu. ft. \$19.00 $^{2,000}_{5,000}\ \mathrm{cu.\ ft.}\ \$11.50_{5,000}\ \mathrm{cu.\ ft.}\ \14.50 20,000 cu. ft. \$31.00
- Fulex Nicotine Fumigator. Carton-12 cans 10,000 cu. ft. \$8.50 20,000 cu. ft. \$14.00
- Fulex Tedion Fumigator. Carton—12 ca 5,000 cu. ft. \$ 9.50 20,000 cu. ft. \$21.00 10,000 cu. ft. \$12.50 Carton-12 cans
- Plant Fume 103-For control of Spider Mite,

FUNGICIDES

- A. D. O.—A drench for controlling damp-off in seed flats. Also effective in controlling the spread of Rhizictonia, Pythium and Fusarium, Stem Rot Diseases. Pint (treats 1,000 sq. ft.) \$4.95 Quart \$9.50
- Captan—For Leaf Spot and Botrytis control. Not adequately effective against Rusts, Powdery Mildew, Bacteria. 5 lb. bag \$4.25
- Ferbam—Controls Fungus Leaf Spots. N effective against Bacteria or Powdery Mildew. 3 lb. bag \$2.00 Case—12 x 3 lb. bags \$21.60
- -For effective control of Fusarium and Bac-Geroxterial Rot (Black Leg) of Geraniums. Also other rots caused by Rhizictonia Solani, a soil and damp-off Fungus. 150 grams—\$8.00 Post Paid
 - (Treats approx. 6,000 21/4" pots)

- Pano Drench—Effective soil drench for prevention of damp-off in seed flats. For use either as a pre- or post-emergence treatment.

 4 oz. bottle— \$5.95 Post Paid
 16 oz. bottle—\$19.20 Post Paid
- Terrachlor W. P. 75% (PCNB)—Soil treatment for control of Rhizoctonia and Sclerotium Rolfsii. 5 lb. bag \$4.25 Case—10 x 5 lb. bags \$41.00 5 lb. bag \$4.25
- Zineb 65W-To control Rusts, Fungus Leaf Spots, Botrytis Blights. No or Powdery Mildews. 3 lb. bag \$2.50 Cas Not effective against bacteria Case—16 x 3 lb. bags \$37.00
- Vapam (Soil Fumigant)—For controlling weeds, weed seeds, Nematodes, and soil Fungi. 1 gallon \$4.75



| | 1 | 1 | 1 | |
|--|--|--|---|--|
| A | | | Criterion 117, 123 | E |
| Abundance 127 | Bluebird. 100, 108, 117 | | | Early Bronze 127 |
| Acclaim 111 | Bluechip 117 | | | Early Crimson 127 |
| Accolade 117, 129 | Blue Ribbon 123 | | | Early Gold 126 |
| Achievement97, 122 | Blue Ridge98, 123 | | | Early Harvest 127 |
| Admiral 128 | Blue Skies 118 | 1 | Crystallite 110 | Early Kathleen 127 |
| Admiration 127 | Bonnaffon Deluxe . 122 | Queen114, 128 | Cupid 129 | Early Yellow 126 |
| Aglow 126 | Bonfire 127 | Carnival114, 128 | | Edna Rowley 128 |
| Alaska | Bonnie 117 | Carolyn Yosick 117 | D | Ed. Seidewitz 108 |
| Alabaster101, 110 | Bride 102, 111 | Carrara 111 | D | Echo |
| Albaflora 125 | Bridesmaid 123 | Cecelia120, 128 | Dandy 112 | Elegance 112 |
| Albatross 105 | Bright | Celebrity 118 | Dandy (H) 127 | Elite 100, 108 |
| Albion 125 | Forecast 112, 126 | Celestra 105 | #2 Dandy 112 | Elite Cushion 127 |
| | Brilliancy 112 | Cecil Beed 128 | Dan Foley 124, 127 | Elizabeth |
| Alert120, 128 Alex Colson122 | Bronze Alvoda 116 | Chairman 106 | Dark Alvoda 118 | Hood 117, 129 |
| | Bronze Chip 115 | Chalk Cliff 110, 121 | Dark Beauregard . 115 | Elmira 125 |
| Allbaba124, 129 | Bronze Delight 115 | Chambrier 99, 107 | Dark Br. Minstrel 116 | Eminence 118 |
| Allegro 129 | Bronze Deluxe 122 | Champagne 129 | Dark Bronze | Enchantress 118 |
| Almega 117, 128 | Bronze Dot 115 | Champ | Ranger103, 116 | Encore 110 |
| Alvoda | Bronze Etude, 103, 116 | Champion | Dark Calumet. 115, 128 | Ensign 121 |
| Ambassador 105 | Bronze Giant 127 | Cushion119, 127 | Darkchip 117 | Enterprise117, 129 |
| Amber Bright 107 | Bronze Goldsmith. 116 | Charm 123 | Dark Ind. | |
| Ambercon 116 | Bronze | Chas. Nye119, 126 | Bronze 107, 122 | Ermine |
| Amberhue 115 | Gremlin 124, 127 | Chattanooga 105 | | |
| Anaconda 107 | Bronze Jubilation . 116 | Cheerful 117 | Yellow106, 121 | Ethel Waters 119, 126 |
| Ann Ladygo | Bronze | Cherrychip 104, 117 | Dark Knight 127 | Etude |
| 98, 120, 129 | Masterpiece 115 | Cheyenne119, 128 | Dark Orchid | Evangeline 128 |
| Apache 127 | Bronze Minstrel 116 | Chippewa 128 | Queen 108 | Evelyn Deveney 128 |
| Apricot Princess | Bronze Orchid | Chiquita126 | #2 Dark | Evelyn Garren 129 |
| Anne98, 122 | Queen 107 | Christmas Greeting 116 | Queen 100, 108 | Everest99, 106 |
| Apricot Shoesmith | Bronze | Christmas Star 116 | | Excello 104, 117 |
| Salmon100, 108 | Palmero 107, 122 | Chris. | Dark Ribbon 123 | Exeter |
| Apricot Valencia., 116 | Bronze Pomponette 127 | Columbus 119, 125 | Dark Valencia 118 | Explorer 106 |
| Araby | Bronze romponene rzz | 00.0003, 120 | Dark falelicia 110 | |
| | Bronze Prince 107 122 | Cinderella 114 | | F |
| Arlora 126 | Bronze Princes 107, 122 | Cinderella 114 Classic 110 125 | Dark Wilson's | F |
| Arlora | Bronze Princess | Classic 110, 125 | Dark Wilson's Yellow97, 121 | Fanfare 113 |
| Arlora | Bronze Princess Anne 98, 107, 122 | Classic 110, 125 Climax 115 | Dark Wilson's Yellow 97, 121 Dark Yellow | Feathertop 110 |
| Arlora | Bronze Princess Anne 98, 107, 122 Bronze Queen 127 | Classic 110, 125 Climax 115 Clipper 122 | Dark Wilson's Yellow97, 121 Dark Yellow Chattanooga106 | Feathertop 110 Festival 116 |
| Arlora 126 Artist's Delight 129 Astoria 119, 126 Autumn Beauty 127 Autumn Song 127 | Bronze Princess Anne. 98, 107, 122 Bronze Queen 127 Bronze Shoesmith | Classic | Dark Wilson's Yellow97, 121 Dark Yellow Chattanooga106 Dark Yellow | Feathertop |
| Arlora 126 Artist's Delight 129 Astoria 119, 126 Autumn Beauty 127 Autumn Song 127 Avalanche 125 | Bronze Princess Anne 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 | Classic | Dark Wilson's Yellow97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 |
| Arlora 126 Artist's Delight 129 Astoria 119, 126 Autumn Beauty 127 Autumn Song 127 | Bronze Princess Anne 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 |
| Arlora 126 Artist's Delight 129 Astoria 119, 126 Autumn Beauty 127 Autumn Song 127 Avalanche 125 | Bronze Princess Anne 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 | Classic | Dark Wilson's Yellow | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 |
| Arlora 126 Artist's Delight 129 Astoria 119, 126 Autumn Beauty 127 Autumn Song 127 Avalanche 125 | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 109 | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 109 Burgundy 127 | Classic | Dark Wilson's Yellow | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 | Classic | Dark Wilson's Yellow | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 109 Burgundy 127 | Classic | Dark Wilson's Yellow | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 | Classic | Dark Wilson's Yellow | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 | Classic 110, 125 Climax 115 Clipper 122 Cloudbank 101, 110 Cloudburst 101, 110 Columbio 99, 105 Commander Cushion 119, 127 Companion 127 Copperchip 103, 115 Copperhead 122 Copper Jubilation 103, 116 Copper Queen 107 | Dark Wilson's Yellow | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 127 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 | Classic 110, 125 Climax 115 Clipper 122 Cloudbank 101, 110 Cloudburst 101, 110 Columbio 99, 105 Commander Cushion 119, 127 Companion 127 Copperchip 103, 115 Copperhead 122 Copper Jubilation 103, 116 Copper Queen 107 Coquette 128 | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 C Calumet (H) 128 | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 Calumet (H) 128 Calumet | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 Delmar 118 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 Calumet (H) 128 Calumet 115 Calverts Gold . 107, 122 | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 Delmarvel 104, 117 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 Freya 126 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 C Calumet (H) 128 Calverts Gold . 107, 122 Calverts | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 Delmar 118 Delmarvel 104, 117 Detroit News 107 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 Freya 126 Friendly Rival 106 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 C Calumet (H) 128 Calumet 115 Calverts Gold . 107, 122 Calverts Orange 107, 122 | Classic | Dark Wilson's Yellow | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 Freya 126 Friendly Rival 106 Frolic 123 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Burgundy 127 Butterball 105 Butterscotch 126 Calumet (H) 128 Calumet | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 Delmar 118 Delmarvel 104, 117 Detroit News 107 Diamond 97, 119 Dillon Beauregard 115 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 Freya 126 Friendly Rival 106 Frolic 123 Fuchsia Fairy 120 129 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 Calumet (H) 128 Calumet | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 Delmar 118 Delmarvel 104, 117 Detroit News 107 Diamond 97, 119 Dillon Beauregard 115 Divinity 102, 111 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 Freya 126 Friendly Rival 106 Frolic 123 Fuchsia Fuchsia Fuchsia 129 #2 Fuchsia |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 C Calumet (H) 128 Calumet | Classic | Dark Wilson's Yellow | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 Freya 126 Friendly Rival 106 Frolic 123 Fuchsia Fairy 120 129 #2 Fuchsia Fairy 120 129 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 C Calumet (H) 128 Calumet | Classic | Dark Wilson's Yellow | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flamboyant 127 Flame Gaiety 103 115 Flame Minstrel 116 Flaming Pillar 124 128 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 Freya 126 Friendly Rival 106 Frolic 123 Fuchsia Fuchsia Fuchsia 129 #2 Fuchsia |
| Arlora | Bronze Princess | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 Delmar 118 Delmarvel 104, 117 Detroit News 107 Diamond 97, 119 Dillon Beauregard 115 Divinity 102, 111 Dolli-ette 119, 128 Dolomite 112 Donlope's | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flair 127 Flamboyant 127 Flame Gaiety 103 Flame Minstrel 116 Flaming Pillar 124 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 Freya 126 Friendly Rival 106 Frolic 123 Fuchsia Fairy 120 129 #2 Fuchsia Fairy 120 129 Fujii Delaware 97 122 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 Calumet (H) 128 Calumet | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 Delmar 118 Delmarvel 104, 117 Detroit News 107 Diamond 97, 119 Dillon Beauregard 115 Divinity 102, 111 Dolli-ette 119, 128 Dolomite 112 Donlope's White Spider 109 | Feathertop 110 Festival 116 Firebird 115 Firecracker 127 Fire Engine 127 Firefly 115 Flair 112 Flair 127 Flamboyant 127 Flame Gaiety 103 Flame Minstrel 116 Flaming Pillar 124 Football Bronze 127 Fortune 111 Forty-Niner 113 Fred Shoesmith 105 Fred Yule 107 Freya 126 Friendly Rival 106 Frolic 123 Fuchsia Fairy 120 129 #2 Fuchsia Fairy 120 129 Fujii Delaware 97 122 |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 C Calumet (H) 128 Calumet | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 Delmar 118 Delmarvel 104, 117 Detroit News 107 Diamond 97, 119 Dillon Beauregard 115 Divinity 102, 111 Dolli-ette 119, 128 Dolomite 112 Donlope's White Spider 109 Dragon 103, 116 | Feathertop |
| Arlora | Bronze Princess Anne . 98, 107, 122 Bronze Queen 127 Bronze Shoesmith Salmon 100, 108 Bronze Wonder 127 Buccaneer 115 Buckskin 115 Bunbu 109 Burgundy 127 Butterball 105 Butterscotch 126 C Calumet (H) 128 Calumet | Classic | Dark Wilson's Yellow 97, 121 Dark Yellow Chattanooga 106 Dark Yellow Satellite 114 Dawn Star 110 Daybreak 115 Dean Kay 128 Debonair 116 Debutante 118 December Glory 105 December Gold 114 December White 105 Delaware 122 Delight 117 Delight (H) 126 Delmar 118 Delmarvel 104, 117 Detroit News 107 Diamond 97, 119 Dillon Beauregard 115 Divinity 102, 111 Dolli-ette 119, 128 Dolomite 112 Donlope's White Spider 109 | Feathertop |



| Gardenia | Golden Wonder 126 | Illinois | Kentucky Pink. 100, 108 | Mefo 105 |
|-----------------------|------------------------|-------------------------|-------------------------|-------------------------|
| 119, 121, 125 | | Imperial 102, 113 | | Melrose 129 |
| | | Imp. Br. Peter | King's | Memento 110 |
| Garnet King 107 | Grand Slam 117 | John 100, 107 | • | Mermaid 123 |
| Garza | | Imp. Early | Klondike 113 | |
| Gay Blade 119 | Granite State 121 | | Riolidike 113 | |
| Gena Harwood 109 | Grace Bradshaw. 125 | Wonder 128 | | Mesabi119, 127 |
| Geo. Luxton 127 | Granny Lehman 125 | Imp. Ind. | L | Meteore 107 |
| Georgia 121 | Greco's Carnation. 111 | White105, 121 | • | Michigan 126 |
| Giant #4 Ind. | | Imp. Ind. | Lady's Choice 128 | Michigan State 125 |
| White99, 105 | Н | Yellow 106, 121 | Lady Fair 129 | Mikado 127 |
| Giltglow 115 | | Imp. Pink Minstrel. 118 | Larry 119, 125 | Milady101, 110 |
| Gt. Betsy Ross 105 | Hadley 125 | Imp. White Peter | Lassie | Milan124, 126 |
| Gladiator 128 | Halo 110 | John | Laughter 108 | Ming 126 |
| Gladness 128 | Handsome 117, 123 | Imp. Yellow | Lavender Lady 129 | Minnbronze 124, 127 |
| | Happiness 112 | Rayonante 109 | | Minnehaha119, 128 |
| Gladys Pearson . 107 | Harbinger 127 | Incurved Delaware 122 | | Minnesota 125 |
| Glamour 123 | Harlequin 116 | Ind. Apricot 107 | Lee Powell 126 | Minnpink 120, 128 |
| Gleam 124, 126 | Harmony 122 | | | |
| Glendale 126 | Harvester 106 | Ind. Bronze107, 122 | Legal Tender 116 | Minstrel |
| Gloria 119, 125 | Harvest Golden 105 | Ind. Gold106, 121 | Legend 118 | Minuet |
| Glow Worm 127 | Heather 123 | Ind. Pink 108, 123 | Leshara 127 | Mirth 117 |
| Gold Ball 113 | Helen Bogue 129 | Ind. White 105 | | Mme. Cadillac 127 |
| Goldberg 113 | Helen Frick 108 | Ind. White #3.105, 121 | | Mischief 120, 129 |
| Gold Coast 112 | Helma 128 | Ind. Yellow 106, 121 | Limelight 125 | Miss America 108 |
| Gold Button 126 | | Indian Head 116 | | Mitsie 125 |
| Golden Boy 106 | Henry Etts 125 | Indian Red 128 | Lipstick 119, 127 | Mojave Gold 127 |
| Gold Lace 109, 121 | Heyday | Indiana 128 | Little America 111, 121 | Mona 128 |
| Gold Lode105, 126 | Hi Fi 118 | lowa 126 | L. I. Beauty 111 | Monterey 128 |
| Goldtop 113 | Highball102, 113 | Irene 125 | Lollipop 113 | Monty 121 |
| | Highbrow 111 | Iron Mountain 127 | Loveliness 128 | #2 Monument 99, 105 |
| Golden Acclaim 114 | Highlander 114 | Ivanhoe 107 | Loubens 123 | Moonlight 126 |
| Golden Age 126 | Hilite 126 | | Luminary 122 | Moonlight |
| Golden Bantam 113 | Holiday 116 | 1 | Luna | Spoon124, 126 |
| Golden Carpet 126 | Honeycomb 126 | | Luyona | Morocco |
| Golden Chord 113 | Horizon 110, 125 | Jackstraw97, 122 | Luxury | Mount Hood 125 |
| Golden Crystal | Humdinger117, 123 | James Stewart 128 | Lynda McLane 118 | Mrs. DuPont 128 |
| 97, 113, 121 | Huntsman114, 128 | Jealousy 113 | Lyric | Mrs. Eisenhower 109 |
| Golden | Hurricane101, 110 | Jessamine | 27.10 | Mrs. Kidder 105 |
| Cushion119, 126 | | Williams119, 125 | | Mrs. Palmero . 107, 122 |
| Golden Elegance. 114 | I | Jetfire 115 | M | Mrs. Roy 107 |
| Golden Favorite 106 | 110 | Jewell117, 129 | Maestro 125 | |
| Golden Fantasy.: 120 | Iceberg 110 | Jewelltone 128 | | Muto's Crimson 107 |
| | Icecap | Joan-Ette | Mahogany | Mulo's Crimson 107 |
| Golden Gate | Iceflo 102, 111 | 119, 121, 125 | Cushion119, 127 | |
| 97, 107, 122 | | Joan Helen 128 | Majestic119, 128 | N |
| Golden Herald 112 | Illini Alba | John Baumann 109 | Major Bowes 108 | Nanook 125 |
| Golden Hours 126 | Illini Brighteyes 114 | John Furst 127 | Major | Nectarine 115 |
| Golden | Illini Cascade 112 | John Milbrath 126 | Cushion120, 128 | New Majorie Mills 127 |
| Marblehead . 99, 106 | Illini Formal 118, 123 | Josephine Ferris 129 | Malou 121 | Nevada |
| Golden Moeller 106 | Illini Glacier 111 | Joybringer 120, 129 | Maple Leaves | Newton 126 |
| Golden Mrs. Ross. 106 | Illini Goldrift 113 | Jubilation 117 | 100, 107, 109 | Nightingale 109 |
| Golden Paramount 113 | Illini Homespun 116 | Jubilee (H) 127 | Marie Hartman 126 | Nina Rebman 128 |
| Golden Pearson. 106 | | Judith Anderson 126 | Marblehead 105 | |
| Golden Princess | Illini Peace 111 | | Margaret Moeller. 105 | Nobility. 103, 114, 127 |
| Anne 97, 106, 122 | | Judy | Marie De Petris 106 | Nomago 109 |
| Goldenrod114 | Illini Snowbound 112 | | Marketeer 105 | No. Queen 129 |
| Golden Shasta 113 | Illini Snowdrift 111 | J. W. Prince 108, 123 | Mary Garden 109 | No. Star |
| Golden Shoesmith. 106 | Illini Springtime 117 | | Mary L. Hall 113 | Northwind 111 |
| | Illini Starflower 111 | K | Masquerade 129 | Nye's Favorite 128 |
| Golden | Illini Starlet 111 | Kansas | | |
| Snowbound 114 | | Kathleen Lehman. 127 | Mayfords Titan 107 | 0 |
| Golden Spoon 126 | Illini Wampum 114 | Keepsake 110 | | Oak Leaf 107 |
| Golden 102 113 | | Kentucky | I . | #2 Oak Leaf 107 |
| Stardust 102, 113 | | | Medusa | |
| Golden Sunset 126 | Silowboolid 114 | 2.025 | | |
| | | | | 100 |



| 014 Cald 102 113 | Polar Ice 125 | Remember | Skyline 101 11 | 1 The Favorite 105 |
|---|---------------------------------|-------------------------------------|---------------------|--|
| | | | | |
| Old Lavender 129 | Pomponette 126 | | | 5 Themesong 105 |
| Olive Longland 128 | | Resolute 115, 122, 128 | | |
| Olnura | | Revelation 112 | | |
| | Powderpuff 125 | Reverence 126 | | |
| Orange | Prairie Moon . 124, 125 | Reward 117 | | |
| Beauregard 115 Orchid Helen 128 | Premier 124, 126 | Riviera | | • |
| Orchid Queen 108 | Princess (H) 128 | Rosamond108, 123 | | |
| Orchid Spoon 129 | Princess Anne. 108, 123 | Rose Jubilation 117 | | |
| Oregon 121 | Princess Kay 125 | Rose Masterpiece . 117 | | |
| Orion | Priscilla 111 | Rose Spoon 129 | | 0 Treasure112, 126 |
| Oregon Trail 122 | Pristine | Rouge Cushion 127 | | |
| Orsona 127 | Profile117, 123 | Royal108, 118 | | |
| Osage 125 | Prom | Royal Bronze 122 | Spangles11 | |
| Ostosa119, 125 | Purdue (H) 128 | Royal-Ette 120, 129 | | |
| Overture 104, 117 | Purple Cushion 128 | Royal Robe 128 | | |
| , | Purple Dusk 128 | Royalist 127 | | 8 |
| Р | Purple Spoon 128 | Rubaiyat 116 | | |
| Pacesetter 110, 121 | Purple Star 128 | Rubicon 115 | | 2 Valencia 118 |
| Pandora 117 | Purple | Ruby Breithaupt 126 | Spungold11 | |
| Panorama 103, 115 | Waters120, 128 | Ruby Mound 124, 127 | Staccato | 7 107, 116, 122 |
| Paper White 125 | | Ruby Shoesmith | Starbright11 | 2 Vanguard 108 |
| Paragon 115 | 0 | | Starburst97, 12 | |
| Paramount 111 | Queen of Pinks 123 | Rusticon 116 | | |
| Parisienne 117 | Queen's Lace. 109, 121 | Ruth Scott 127 | | |
| Pathfinder 126 | Quicksilver 121 | | Sterling 10 | 0 |
| Pat Lehman 129 | Quicksilver (H) 125 | S | Stylish 12 | |
| Pattersons White 121 | Quickshiver (11) 125 | | Sudan | |
| Peach Chip 117 | | Sally 115 | | |
| Pearl Chip104, 117 | R | Salmon Precose 128 | | |
| Peking119, 121, 126 | Radiance 119, 128 | | | |
| Pennant | Ranger 116 | | | 0 1 |
| Pepita 125 | Raggedy Ann 125 | Sandrock 122 | | |
| Perle Angevine 123 | Rainier | Sarasota 126 | | |
| Personality 123 | Rajah115, 128 | Satellite | | |
| Petrisian Rose 128 | Raspberry Ice 120 | Sauterne 112 Scarlet Crimson 127 | | |
| Pilgrim | Rayonnante 109 Real Gold 126 | | | |
| | | | | |
| | Red Balcombe's | Scintillation 117 | Sunrise 11 | White Cloud 125 White |
| • | Perf 107 | Sculpture 111 | Sunup | |
| Pink Deluxe 123 | Red Climax 115 | Searchlight124, 127 | Sun Valley11 | |
| Pink Dot | Red Daisy 115 | Seagull 110 | Supreme Whitetop 11 | |
| Pink Fred | Red Galaxy 116 | Sept. Bronze 127 | Supertop11 | |
| \ 1 | | Sept. Cheer 127 | Surfside11 | |
| Pink | Red Gold 127 | Sept. Sunshine 126 | | The state of the s |
| Jubilation . 104, 117 | Red | Shalimar (H) 125 | Leighton109, 12 | |
| Pink Mistletoe 108 | Humdinger. 115, 122 | Shamrock 114 | Sybil 11 | |
| I | #2 Red | Shane 113 | | |
| Pink Portrait 117, 123 | Humdinger. 115, 122 | Shasta | , | White Norma 111 |
| Pink Quill 128 | Red Jetfire103, 115 | Shoesmith's | - | White Penant 110 |
| Pink Ribbon 123 | Red Mischief . 119, 127 | Salmon100, 108 | I | White Pink Chief 105 |
| Pink Snowdrop 118 | Red Minstrel 116 | Signet104, 117 | Taffeta | |
| Pink Spoon | Red Reward 115 | Silver Bow 110 | Talmeda 11 | 2 White Prince . 105, 121 |
| Cushion 128 | Red Riding Hood 127 | Silvercrest 111 | Tanfastic11 | |
| | Red Rolinda 116 | | | 6 White Rayonnante 109 |
| Pippin 113 | Red Shoesmith | Silver Queen 109 | | 2 White Rice 125 |
| Plum 109 | Salmon100, 108 | | | 7 White Sail 125 |
| Poinsettia 116 | | Silversmith 112 | | 7 White Snowdrop 111 |
| Pointevine | | Silvertone 110 | | |
| Supreme 121 | Reflection 128 | Siren 114 | Thanks. Pink 10 | 8 White Taffeta 111 |
| | | | | |



| White Tower 125 | Yel. Avalanche 126 | Yel. Garza 114 | Yel. Marketeer 106 | #2 Yel. |
|--|------------------------|--------------------------|-----------------------|------------------------|
| Whiterion110, 121 | Yel. Beauregard 113 | #2 Yel. Glory 106 | Yel. Marvel 106 | Shoesmith 99, 106 |
| Whitetop 110 | Yel. Betsy Ross 106 | #3 Yel. Glory 99, 106 | Yel. Mefo 106 | Yel. Silvertone 112 |
| White Valencia 111 | Yel. Bow102, 112 | Yel. Highbrow 113 | #2 Yel. | Yel. Snow 114 |
| White Wonder 125 | Yel. Calumet 112, 126 | Yel. lceberg 113 | Monument 99, 106 | Yel. Snowcrest 114 |
| Wilson's White 121 | Yel. Chattanooga . 106 | #2 Yel. Iceberg 113 | Yel. | Yel. Spoon 119, 126 |
| Wisconsin 128 | Yellowchip 112 | Yel. Igloo 113 | Nightengale . 99, 109 | Yel. Stardust 102, 113 |
| Woking | Yel. Chris. | Yel. Irene 126 | Yel. | Yel. Supreme (H) 126 |
| Scarlet 107, 122 | Columbus 119, 126 | Yel. Illini | Pacesetter . 113, 122 | Yel. Taffeta 113 |
| Wizard 115 | Yel. Crystal 113, 121 | Cascade103, 114 | Yel. Paramount 113 | Yel. Tiptop 113 |
| W. P. Snyder 127 | Yel. Cushion 119, 126 | Yel. III. Snowdrift 113 | Yel. Peter John 106 | Yellowtop 113 |
| | Yel. Delaware 122 | Yel. Ivanhoe 106 | Yel. Prince 106, 122 | Yel, Valencia 114 |
| V | Yel. Deluxe97, 122 | Yel. Keepsake 112 | Yel, Queen 106 | Yukon |
| | Yel. Dot 112 | Yel. Lace 109 | #2 Yel. Queen 106 | Yuleflame 114 |
| Yel. Acclaim 114 | Yel. Enchantress 114 | Yel. Leighton . 109, 122 | Yel. Sculpture 113 | |
| Yel. Acclaim 114 Yel. Albatross 106 | Yel. Fortune 114 | Yel. L. I. Beauty 113 | Yel. Shasta 113 | Z |
| Yel. Ambassador 106 | Yel. Galaxy 114 | Yel. Marblehead 106 | Yel. Shoesmith 106 | Zest 119 |

CONTENTS

| Flowering Schedules: | Variety Descriptions: | For a complete alphabetical list |
|----------------------------------|--|----------------------------------|
| Flowering Schedule20-39 | Fujii Varieties 109 | of all varieties in Manual see |
| Pot Plant Schedule55-96 | New Garden Varieties 124 | pages 99-130. |
| Fast Disbud Schedule40-46 | Standard Varieties | Rust |
| Aphids | Pompons, Decoratives, | Sclerotinia |
| Bacterial Wilt | Single & Anemone | Selection and Varieties 11 |
| Blindness | Varieties 101-104, 110-118 | Septoria Leaf Spot 18 |
| Botrytis | Pot Plant Varieties 97-98, 121-123 Spring Pot Varieties 119-120 | Shading Information |
| Chemical Sterilization 2 | Garden Varieties 125-130 | Shipping Flowers |
| Chemical Oreimzanon | Interrupted Lighting 12 | |
| Combination Sprays | Latitude Map 47 | Soils 2 |
| Corn Ear Worm | Leaf Miner | Soluble Salts 4 |
| Cutting Flowers 10 | Leaf Tyer | Sowbugs |
| Cutworms | Lighting | Steam Sterilization 3 |
| Daylength Control 11 | Liquid Fertilizing | Stem Rots |
| Disbudding 8 | Mealy Bugs | Supports |
| Diseases and Their Control 16-18 | Mildew | Symphylids 15 |
| Disspraying 8 | Mites | Tarnished Plant Bug 15 |
| Fast Disbud Culture 40 | Pests and Control | Taking Bud 8 |
| Fertilizers | Pinching | Temperature |
| Fertoject 5 | Planting 6 Pot Plant Culture 48-54 | TermsInside Front Cover |
| Foliar Nematode 19 | Premature Budding | Termites |
| Handling Cuttings | Pruning | Thrips |
| Insecticides 135 | Ray Blight | Verticillium Wilt |
| Insects and Their Control 13-15 | Response Group | Viruses |
| | | |



JIFFY POTS

These are now extensively used to hasten programs and smooth out tight situations where a crop may be delayed. The cuttings can be started in a 3" square jiffy preferably and can be pinched in the pot. We caution you to try and bench before the 5th week, as crop may suffer otherwise. Packed 1000 per ctn.

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| For a bench of this width | Use cloth of this width | And add to length for end hangover |
|---------------------------|-------------------------|------------------------------------|
| 3 feet | 12 feet | 9 feet |
| $31/_{2}$ | 12 | 81/2 |
| 4 | $13\frac{1}{2}$ | $91/_{2}$ |
| $41/_{2}$ | $13\frac{1}{2}$ | 9 |
| 5 | 15 | 10 |

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| | J. | AN | IU. | AR' | Y | 11 | JULY | | | | | | |
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| Sun | Mon | Tue | Wed | Thur | Fri | Sat | Sun | Mon | Tue | Wed | Thu | Fri | Sat |
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| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 29 | 30 | 31 | | | | | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
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| | F | EBI | RU. | AR | Y | | | | AU | GU | JS'1 | [| |
| Sun | Mon | Tue | Wed | Thur | Fri | Sat | Sun | Mon | Tue | Wed | Thu | Fri | Sat |
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| | MARCH | | | | | | | | | | |
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| Sun | Mon | Tue | Wed | Thur | Fri | Sat | | | | | |
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| SEPTEMBER | | | | | | | | | |
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| | APRIL | | | | | | | | | |
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| Sal | Fri | Thur | Wed | Tue | Mon | Sun |
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| | | | | | | 31 |

FLOWER HOLIDAY CALENDAR

| YEAR | VALENTINE'S DAY | EASTER | MOTHER'S DAY | MEMORIAL DAY | SWEETEST DAY | THANKSGIVING | CHRISTMAS |
|------|-----------------|----------|--------------|--------------|--------------|--------------|-----------|
| 1961 | FEB. 14 | APRIL 2 | MAY 14 | MAY 30 | OCT. 21 | NOV. 23 | DEC. 25 |
| 1962 | FEB. 14 | APRIL 22 | MAY 13 | MAY 30 | OCT. 20 | NOV. 22 | DEC. 25 |
| 1963 | FEB. 14 | APRIL 14 | MAY 12 | MAY 30 | OCT. 19 | NOV. 28 | DEC. 25 |

1962

1963

| JANUARY | | | | | | | | | | | |
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FEBRUARY

| JULY | | | | | | | | | | |
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| un | Mon | Tues | Wed | Thur | Fri | Sat |
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| Sun | Mon | Tues | Wed | Thur | Fri | Sat |
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| Mon | Tues | Wed | Thu | Fri | Sat | | Sun | Mon | Tues | Wed | Thur | Fri | Sat | |
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JULY

| | MARCH | | | | | | | | | | |
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| Sun | Mon | Tues | Wed | Thur | Fri | Sat | | | | | |
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| | OCTOBER | | | | | | | |
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| Sun | Mon | Tues | Wed | Thur | Fri | Sat | | |
| | | 1 | 2 | 3 | 4 | 5 | | |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | | |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | | |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 | | |
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| | MAY | | | | | | | | |
|-----|-------------------------------|----|----|----|----|----|--|--|--|
| Sun | Sun Mon Tues Wed Thur Fri Sat | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | | | |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | | | |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | | | |
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| Sun | Mon | Tues | Wed | Thu | Fri | Sat |
|-----|-----|------|-----|-----|-----|-----|
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| Sun | Mon | Tues | Wed | Thur | Fri | Sat |
|-----|-----|------|-----|------|-----|-----|
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | 13 | | |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
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| DECEMBER | | | | | | | | | |
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| Sun Mon Tues Wed Thur Fri Sat | | | | | | | | | |
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